

SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS
OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, & 30

1. REQUISITION NUMBER				PAGE 1 OF 30	
2. CONTRACT NO.		3. AWARD/EFFECTIVE DATE		4. ORDER NUMBER	
5. SOLICITATION NUMBER N65540-04-Q-0057		6. SOLICITATION ISSUE DATE 03-DEC-05			
7. FOR SOLICITATION INFORMATION CALL:		a. NAME STACEY THOMPSON		b. TELEPHONE NUMBER (No Collect Calls) 215-897-7160 215-897-7059 (FAX)	
9. ISSUED BY CONTRACTING OFFICER NSWC CARDEROCK DIVISION 5001 S. BROAD STREET PHILADELPHIA PA 19112-1403		CODE N65540		10. THIS ACQUISITION IS <input type="checkbox"/> UNRESTRICTED <input type="checkbox"/> SET ASIDE: % FOR <input type="checkbox"/> SMALL BUSINESS <input type="checkbox"/> SMALL DISADV. BUSINESS <input type="checkbox"/> 8(A) SIC: SIZE STANDARD:	
11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED <input type="checkbox"/> SEE SCHEDULE		12. DISCOUNT TERMS		13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700) <input type="checkbox"/>	
13b. RATING		14. METHOD OF SOLICITATION <input type="checkbox"/> RFQ <input type="checkbox"/> IFB <input type="checkbox"/> RFP			
15. DELIVER TO RECEIVING OFFICER, FISC, NSWC CARDEROCK DIVISION 1601 LANGLEY AVENUE PHILA. PA 19112-5051 ATTN: NAVAL BUSINESS CENTER		CODE N65540		16. ADMINISTERED BY CODE N65540	
17a. CONTRACTOR/OFFEROR CODE FACILITY CODE		18a. PAYMENT WILL BE MADE BY CODE			
TELEPHONE NO.					
<input type="checkbox"/> 17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER		18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED <input checked="" type="checkbox"/> SEE ADDENDUM			
19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES			21. QUANTITY	22. UNIT
0001	REQN. NO. 95500 /33117243 ITEM NAME: CONSOLE DISPLAY UNIT IN ACCORDANCE WITH THE ATTACHED TECHNICAL SPECIFICATION, FOR REPLACEMENT CONSOLE DISPLAY UNIT BASE QUANTITY (Attach Additional Sheets as Necessary)			60	EA
23. UNIT PRICE				24. AMOUNT	
25. ACCOUNTING AND APPROPRIATION DATA				26. TOTAL AWARD AMOUNT (For Govt. Use Only)	
<input type="checkbox"/> 27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4. FAR 52.212-3, AND 52.212-5 ARE ATTACHED. ADDENDA <input checked="" type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED.				<input type="checkbox"/> 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED. ADDENDA <input type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED.	
28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED HEREIN. <input type="checkbox"/>			29. AWARD OF CONTRACT: REFERENCE OFFER DATED . YOUR OFFER ON SOLICITATION (BLOCK 5). INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS: <input type="checkbox"/>		
30a. SIGNATURE OF OFFEROR/CONTRACTOR			31a. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER)		
30b. NAME AND TITLE OF SIGNER (TYPE OR PRINT)		30c. DATE SIGNED		31b. NAME OF CONTRACTING OFFICER (TYPE OR PRINT)	
				31c. DATE SIGNED	
32a. QUANTITY IN COLUMN 21 HAS BEEN <input type="checkbox"/> RECEIVED <input type="checkbox"/> INSPECTED <input type="checkbox"/> ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED			33. SHIP NUMBER <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL		34. VOUCHER NUMBER
32b. SIGNATURE OF AUTHORIZED GOVT. REPRESENTATIVE			32c. DATE		35. AMOUNT VERIFIED CORRECT FOR
41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT			36. PAYMENT <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL		37. CHECK NUMBER
41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER			38. S/R ACCOUNT NUMBER		39. S/R VOUCHER NUMBER
41c. DATE			42a. RECEIVED BY (Print)		40. PAID BY
			42b. RECEIVED AT (Location)		
			42c. DATE REC'D (YY/MM/DD)		42d. TOTAL CONTAINERS

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SECTION B SUPPLIES/SERVICES

ITEM	SUPPLIES/SERVICES	QUANTITY UI	U-PRICE	AMOUNT
0002	REQN. NO. 95500 /33117247 ITEM NAME: SAME AS ITEM 0001 OPTION 1	30 EA 30 EA OR 60 EA		
0003	REQN. NO. 95500 /33117250 ITEM NAME: SAME AS ITEM 0001 OPTION 2	30 EA 30 EA OR 60 EA		
0004	REQN. NO. 95500 /33117253 ITEM NAME: SAME AS ITEM 0001 OPTION 3	30 EA 30 EA OR 60 EA		
0005	REQN. NO. 95500 /33117256 ITEM NAME: SAME AS ITEM 0001 OPTION 4	30 EA 30 EA OR 60 EA		
0006	REQN. NO. 95500 /33117259 ITEM NAME: SAME AS ITEM 0001 FIRST ARTICLE SAMPLE	1 EA		
0007	REQN. NO. 95500 /33117263 ITEM NAME: FIRST ARTICLE TEST REPORT	NSP*		
0008	REQN. NO. 95500 /33117265 ITEM NAME: TECHNICAL MANUAL, IN ACCORDANCE WITH SEQUENCE NO. A001 OF DD FORM 1423, CDRL	1 LT		
0009	REQN. NO. 95500 /33117267 ITEM NAME: SOFTWARE PRODUCT SPECIFICATION IN ACCORDANCE WITH SEQUENCE NO. A002 OF DD FORM 1423, CDRL	1 LT		
0010	REQN. NO. 95500 /33117270 ITEM NAME: ENGINEERING DATA FOR PROVISIONING, IN ACCORDANCE WITH SEQUENCE NO. A003 OF THE DD FORM 1423, CDRL	1 LT		

*NSP = Not Separately Priced

This Request for Quotations (RFQ) covers the procurement of a replacement Console Display Unit for use in the Machinery Control System Console on DDG-51 through DDG-82 and AOE Class Ships and Associated Technical Data. The Display Console Unit to be furnished shall be in accordance with the attached Technical Specification for Replacement Console Display Unit DDG 51 through 82 DDG and AOE Class Machinery Control Consoles, which is provided as Attachment I. This RFQ is issued using Simplified Acquisition Procedures pursuant to the Test Program for Certain Commercial Items in accordance with Subpart 13.5 of the Federal Acquisition Regulation (FAR).

This RFQ covers the procurement of a base quantity of 60 Console Display Units under Item 0001 and contains four options for the furnishing of additional Console Displays Units under Items 0002, 0003, 0004 and 0005 in accordance with Clause 52.217-7 herein. Items 0002, 0003, 0004 and 0005 cover the furnishing of alternate quantities of either 30 or 60 Console Display Units. The Government may exercise the options covered by Items 0002, 0003, 0004 and 0005 for at one time within the option period for 60 units or two times within the option period each time for 30 units. Accordingly, offerors are requested to propose a unit price and extended amounts for alternate quantities of 30, 30 and 60 units under the option items.

Prior to production and delivery of the base quantity covered by Item 0001, the contractor will produce a First Article Sample, which will be subjected to both contractor testing in accordance with Clause 52.209-3 and testing by the Government in accordance with Clause 52.209-4 herein. The Test Report detailing the results of the contractor first article tests is covered by Item 0007 and shall be in accordance with Sequence Number A001 of the DD Form 1423, Contract Data Requirements List, which is provided as Exhibit A to this RFQ. Subsequent to completion of testing by the contractor, the First Article Sample, which is covered by Item 0006, will be delivered to the Government for testing. Both the first article tests to be performed by the contractor and the first article tests to be conducted by the Government are contained in the Technical Specification. Item 0007 has been designated in the Schedule as "Not Separately Priced" (NSP) and offerors are requested to include the price for Item 0007, if any, in the price of the First Article Sample covered by Item 0006.

Item 0008 covers the furnishing of a Technical Manual, Item 0009 covers the furnishing of a Software Product Specification (SPS) and Item 0010 covers the furnishing of Engineering Data for Provisioning (EDP) in accordance with Sequence Numbers A002, A003 and A004 respectively of the DD Form 1423, Contract Data Requirements List," which is provided as Exhibit A to this RFQ.

The Government intends to make a single award to the offeror who submits the low price technically acceptable quotation in response to this RFQ. Technical acceptability shall be determined based on an evaluation of Technical Compliance and Corporate Experience.

Quotations will be rated as either Acceptable or Not Acceptable under each factor and, assigned an overall rating of Acceptable or Not Acceptable based on the rating in each factor. In order for a quotation to be assigned an overall rating of Acceptable, it must be assessed as Acceptable in both Technical Compliance and Corporate Experience.

In order to determine technical acceptability, offerors are required to submit as part of their quotation information under each of the technical factors, as discussed below.

TECHNICAL COMPLIANCE

In this factor offerors shall provide information that clearly demonstrates the Console Display Unit to be furnished will comply with the requirements contained in the attached Technical Specification. In particular, the offeror must provide the following:

1. Information demonstrating the Console Display Unit it proposes to furnish will possess the same form, fit and function as the unit it is intended to replace and can be installed in the DDG/AOE Machinery Controls Console without any modifications.
2. Information on the proposed communication scheme between the Machinery Control System Navy Tactical Data System (NTDS) FAST, Console Keyboard and the replacement Console Display Unit in accordance with paragraph 3.2.4 of General Electric Company Specification Control Drawing 63A141835, which is enclosed to the Technical Specification.
3. Information on the projected failure data rate for the Console Display Unit to be furnished and the basis for the projected failure rate data. Refer to paragraph 3.3.1 of General Electric Company Specification Control Drawing 63A141835 for minimum reliability criteria.
4. Information of the repair level of the Console Display Unit to be furnished, including whether the Console Display Unit will be repairable at the depot level.

CORPORATE EXPERIENCE

In this factor the offeror shall provide information on the production and/or manufacture of same or similar items. In addition, the offeror must furnish information on its capabilities, resources, equipment, and facilities that will be used during the production, manufacture and testing of the Console Display Unit and the quality/inspection system and/or procedures it plans to employ to ensure the Console Display Unit will comply with the requirements contained in the Technical Specification.

Failure to submit adequate information on the above technical factors will result in rejection of the quotation. The Government intends to make an award based on the initial quotations received. Therefore, offerors are advised their initial quotation should contain its best terms from both a technical and price standpoint.

All items will be delivered on a F.O.B. Destination basis (that is, inclusive of all transportation or shipping costs) to the destination specified in Block 15 on page 1 of this RFQ in accordance with Clause 52.247-34 herein. Quotations submitted on other than a F.O.B. Destination basis will be determined to be nonresponsive and may not be considered for award.

Attachment: I - Technical Specification for Replacement Console Display Unit For DDG 51 thru 82 DDG and AOE Class Machinery Control Console and Enclosure – General Electric Source Control Drawing 63A141835, Revision P (47 pages)

Exhibit: A – DD Form 1423, Contract Data Requirements List, and
EDFP (5 pages)

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52.212-4 CONTRACT TERMS AND CONDITIONS--COMMERCIAL ITEMS
(OCT 2003)

(a) Inspection/Acceptance. The Contractor shall only tender for acceptance those items that conform to the requirements of this contract. The Government reserves the right to inspect or test any supplies or services that have been tendered for acceptance. The Government may require repair or replacement of nonconforming supplies or reperformance of nonconforming services at no increase in contract price. The Government must exercise its post-acceptance rights--(1) Within a reasonable time after the defect was discovered or should have been discovered; and (2) Before any substantial change occurs in the condition of the item, unless the change is due to the defect in the item.

(b) Assignment. The Contractor or its assignee may assign its rights to receive payment due as a result of performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency in accordance with the Assignment of Claims Act (31 U.S.C. 3727). However, when a third party makes payment (e.g., use of the Governmentwide commercial purchase card), the Contractor may not assign its rights to receive payment under this contract.

(c) Changes. Changes in the terms and conditions of this contract may be made only by written agreement of the parties.

(d) Disputes. This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613). Failure of the parties to this contract to reach agreement on any request for equitable adjustment, claim, appeal or action arising under or relating to this contract shall be a dispute to be resolved in accordance with the clause at FAR 52.233-1, Disputes, which is incorporated herein by reference. The Contractor shall proceed diligently with performance of this contract, pending final resolution of any dispute arising under the contract.

(e) Definitions. The clause at FAR 52.202-1, Definitions, is incorporated herein by reference.

(f) Excusable delays. The Contractor shall be liable for default unless nonperformance is caused by an occurrence Beyond the reasonable control of the Contractor and without its fault or negligence such as, acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, unusually severe weather, and delays of common carriers. The Contractor shall notify the Contracting Officer in writing as soon as it is reasonably possible after the commencement of any excusable delay, setting forth the full particulars in connection therewith, shall remedy such occurrence with all reasonable dispatch, and shall promptly give written notice to the Contracting Officer of the cessation of such occurrence.

(g) Invoice. (1) The Contractor shall submit an original invoice and three copies (or electronic invoice, if authorized,) to the address designated in the contract to receive invoices. An invoice must include--

- (i) Name and address of the Contractor;
- (ii) Invoice date and number;
- (iii) Contract number, contract line item number and, if applicable, the order number;
- (iv) Description, quantity, unit of measure, unit price and extended price of the items delivered;
- (v) Shipping number and date of shipment including the

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bill of lading number and weight of shipment if shipped on Government bill of lading;

(vi) Terms of any discount for prompt payment offered;

(vii) Name and address of official to whom payment is to be sent;

(viii) Name, title, and phone number of person to notify in event of defective invoice; and

(ix) Taxpayer Identification Number (TIN). The Contractor shall include its TIN on the invoice only if required elsewhere in this contract.

(x) Electronic funds transfer (EFT) banking information.

(A) The Contractor shall include EFT banking information on the invoice only if required elsewhere in this contract.

(B) If EFT banking information is not required to be on the invoice, in order for the invoice to be a proper invoice, the Contractor shall have submitted correct EFT banking information in accordance with the applicable solicitation provision, contract clause (e.g., 52.232-33, Payment by Electronic Funds Transfer Central Contractor Registration, or 52.232-34, Payment by Electronic Funds Transfer Other Than Central Contractor Registration), or applicable agency procedures.

(C) EFT banking information is not required if the Government waived the requirement to pay by EFT.

(2) Invoices will be handled in accordance with the Prompt Payment Act (31 U.S.C. 3903) and Office of Management and Budget (OMB) prompt payment regulations at 5 CFR part 1315.

(h) Patent indemnity. The Contractor shall indemnify the Government and its officers, employees and agents against liability, including costs, for actual or alleged direct or contributory infringement of, or inducement to infringe, any United States or foreign patent, trademark or copyright, arising out of the performance of this contract, provided the Contractor is reasonably notified of such claims and proceedings.

(i) Payment. (1) Items accepted. Payment shall be made for items accepted by the Government that have been delivered to the delivery destinations set forth in this contract.

(2) Prompt payment. The Government will make payment in accordance with the Prompt Payment Act (31 U.S.C. 3903) and prompt payment regulations at 5 CFR part 1315.

(3) Electronic Funds Transfer (EFT). If the Government makes payment by EFT, see 52.212-5(b) for the appropriate EFT clause.

(4) Discount. In connection with any discount offered for early payment, time shall be computed from the date of the invoice. For the purpose of computing the discount earned, payment shall be considered to have been made on the date which appears on the payment check or the specified payment date if an electronic funds transfer payment is made.

(5) Overpayments. If the Contractor becomes aware of a duplicate contract financing or invoice payment or that the Government has otherwise overpaid on a contract financing or invoice payment, the Contractor shall immediately notify the Contracting Officer and request instructions for disposition of the overpayment.

(j) Risk of loss. Unless the contract specifically provides otherwise, risk of loss or damage to the supplies provided under this contract shall remain with the Contractor until, and shall pass to the Government upon:

(1) Delivery of the supplies to a carrier, if transportation is f.o.b. origin; or

(2) Delivery of the supplies to the Government at the

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destination specified in the contract, if transportation is f.o.b. destination.

(k) Taxes. The contract price includes all applicable Federal, State, and local taxes and duties.

(l) Termination for the Government's convenience. The Government reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such termination, the Contractor shall immediately stop all work hereunder and shall immediately cause any and all of its suppliers and subcontractors to cease work. Subject to the terms of this contract, the Contractor shall be paid a percentage of the contract price reflecting the percentage of the work performed prior to the notice of termination, plus reasonable charges the Contractor can demonstrate to the satisfaction of the Government using its standard record keeping system, have resulted from the termination. The Contractor shall not be required to comply with the cost accounting standards or contract cost principles for this purpose. This paragraph does not give the Government any right to audit the Contractor's records. The Contractor shall not be paid for any work performed or costs incurred which reasonably could have been avoided.

(m) Termination for cause. The Government may terminate this contract, or any part hereof, for cause in the event of any default by the Contractor, or if the Contractor fails to comply with any contract terms and conditions, or fails to provide the Government, upon request, with adequate assurances of future performance. In the event of termination for cause, the Government shall not be liable to the Contractor for any amount for supplies or services not accepted, and the Contractor shall be liable to the Government for any and all rights and remedies provided by law. If it is determined that the Government improperly terminated this contract for default, such termination shall be deemed a termination for convenience.

(n) Title. Unless specified elsewhere in this contract, title to items furnished under this contract shall pass to the Government upon acceptance, regardless of when or where the Government takes physical possession.

(o) Warranty. The Contractor warrants and implies that the items delivered hereunder are merchantable and fit for use for the particular purpose described in this contract.

(p) Limitation of liability. Except as otherwise provided by an express warranty, the Contractor will not be liable to the Government for consequential damages resulting from any defect or deficiencies in accepted items.

(q) Other compliances. The Contractor shall comply with all applicable Federal, State and local laws, executive orders, rules and regulations applicable to its performance under this contract.

(r) Compliance with laws unique to Government contracts. The Contractor agrees to comply with 31 U.S.C. 1352 relating to limitations on the use of appropriated funds to influence certain Federal contracts; 18 U.S.C. 431 relating to officials not to benefit; 40 U.S.C. 327, et seq., Contract Work Hours and Safety Standards Act; 41 U.S.C. 51-58, Anti-Kickback Act of 1986; 41 U.S.C. 265 and 10 U.S.C. 2409 relating to whistleblower protections; 49 U.S.C. 40118, Fly American; and 41 U.S.C. 423 relating to procurement integrity.

(s) Order of precedence. Any inconsistencies in this solicitation or contract shall be resolved by giving precedence in the following order:

(1) The schedule of supplies/services.

(2) The Assignments, Disputes, Payments, Invoice, Other Compliances, and Compliance with Laws Unique to Government Contracts paragraphs of this clause.

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- (3) The clause at 52.212-5.
- (4) Addenda to this solicitation or contract, including any license agreements for computer software.
- (5) Solicitation provisions if this is a solicitation.
- (6) Other paragraphs of this clause.
- (7) The Standard Form 1449.
- (8) Other documents, exhibits, and attachments.
- (9) The specification.

(t) Central Contractor Registration (CCR). (1) Unless exempted by an addendum to this contract, the Contractor is responsible during performance and through final payment of any contract for the accuracy and completeness of the data within the CCR database, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to review and update on an annual basis from the date of initial registration or subsequent updates its information in the CCR database to ensure it is current, accurate and complete. Updating information in the CCR does not alter the terms and conditions of this contract and is not a substitute for a properly executed contractual document.

(2)(i) If a Contractor has legally changed its business name, "doing business as" name, or division name (whichever is shown on the contract), or has transferred the assets used in performing the contract, but has not completed the necessary requirements regarding novation and change-of-name agreements in FAR subpart 42.12, the Contractor shall provide the responsible Contracting Officer a minimum of one business day's written notification of its intention to (A) change the name in the CCR database; (B) comply with the requirements of subpart 42.12; and (C) agree in writing to the timeline and procedures specified by the responsible Contracting Officer. The Contractor must provide with the notification sufficient documentation to support the legally changed name.

(ii) If the Contractor fails to comply with the requirements of paragraph (t)(2)(i) of this clause, or fails to perform the agreement at paragraph (t)(2)(i)(C) of this clause, and, in the absence of a properly executed novation or change-of-name agreement, the CCR information that shows the Contractor to be other than the Contractor indicated in the contract will be considered to be incorrect information within the meaning of the "Suspension of Payment" paragraph of the electronic funds transfer (EFT) clause of this contract.

(3) The Contractor shall not change the name or address for EFT payments or manual payments, as appropriate, in the CCR record to reflect an assignee for the purpose of assignment of claims (see Subpart 32.8, Assignment of Claims). Assignees shall be separately registered in the CCR database. Information provided to the Contractor's CCR record that indicates payments, including those made by EFT, to an ultimate recipient other than that Contractor will be considered to be incorrect information within the meaning of the "Suspension of payment" paragraph of the EFT clause of this contract.

(4) Offerors and Contractors may obtain information on registration and annual confirmation requirements via the internet at <http://www.ccr.gov> or by calling 1-888-227-2423 or 269-961-5757.

52.212-5 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS--COMMERCIAL ITEMS (OCT 2003)

(a) The Contractor shall comply with the following Federal Acquisition Regulation (FAR) clause, which is incorporated in this contract by reference, to implement provisions of law or

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Executive orders applicable to acquisitions of commercial items:
52.233-3, Protest after Award (AUG 1996) (31 U.S.C. 3553).

(b) The Contractor shall comply with the FAR clauses in this paragraph (b) that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items: [Contracting Officer check as appropriate.]

- ☐ (1) 52.203-6, Restrictions on Subcontractor Sales to the Government (JUL 1995), with Alternate I (OCT 1995) (41 U.S.C. 253g and 10 U.S.C. 2402).
- ☐ (2) 52.219-3, Notice of Total HUBZone Set-Aside (JAN 1999) (15 U.S.C. 657a).
- ☐ (3) 52.219-4, Notice of Price Evaluation Preference for HUBZone Small Business Concerns (JAN 1999) (if the offeror elects to waive the preference, it shall so indicate in its offer) (15 U.S.C. 657a).
- ☐ (4) (i) 52.219-5, Very Small Business Set-Aside (JUNE 2003) (Pub. L. 103-403, section 304, Small Business Reauthorization and Amendments Act of 1994).
(ii) Alternate I (MAR 1999) of 52.219-5.
(iii) Alternate II (JUNE 2003) of 52.219-5.
- ☐ (5) (i) 52.219-6, Notice of Total Small Business Set-Aside (JUNE 2003) (15 U.S.C. 644).
(ii) Alternate I (OCT 1995) of 52.219-6.
- ☐ (6) (i) 52.219-7, Notice of Partial Small Business Set-Aside (JUNE 2003) (15 U.S.C. 644).
(ii) Alternate I (OCT 1995) of 52.219-7.
- ☐ (7) 52.219-8, Utilization of Small Business Concerns (OCT 2000) (15 U.S.C. 637 (d) (2) and (3)).
- ☐ (8) (i) 52.219-9, Small Business Subcontracting Plan (JAN 2002) (15 U.S.C. 637(d)(4)).
(ii) Alternate I (OCT 2001) of 52.219-9.
(iii) Alternate II (OCT 2001) of 52.219-9.
- ☐ (9) 52.219-14, Limitations on Subcontracting (DEC 1996) (15 U.S.C. 637(a)(14)).
- ☐ (10) (i) 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns (JUNE 2003) (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323) (if the offeror elects to waive the adjustment, it shall so indicate in its offer).
(ii) Alternate I (JUNE 2003) of 52.219-23.
- ☐ (11) 52.219-25, Small Disadvantaged Business Participation Program--Disadvantaged Status and Reporting (OCT 1999) (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
- ☐ (12) 52.219-26, Small Disadvantaged Business Participation Program--Incentive Subcontracting (OCT 2000) (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
- ☐ (13) 52.222-3, Convict Labor (JUNE 2003) (E.O. 11755).
- ☐ (14) 52.222-19, Child Labor--Cooperation with Authorities and Remedies (SEP 2002) (E.O. 13126).
- ☒ (15) 52.222-21, Prohibition of Segregated Facilities (FEB 1999).
- ☒ (16) 52.222-26, Equal Opportunity (APR 2002) (E.O. 11246).
- ☒ (17) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (DEC 2001) (38 U.S.C. 4212).
- ☒ (18) 52.222-36, Affirmative Action for Workers with Disabilities (JUN 1998) (29 U.S.C. 793).
- ☒ (19) 52.222-37, Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (DEC 2001) (38 U.S.C. 4212).
- ☐ (20) (i) 52.223-9, Estimate of Percentage of Recovered Material Content for EPA-Designated Products

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- ____ (AUG 2000) (42 U.S.C. 6962(c)(3)(A)(ii)).
- ____ (ii) Alternate I (AUG 2000) of 52.223-9 (42 U.S.C. 6962(i)(2)(C)).
- ____ (21) 52.225-1, Buy American Act--Supplies (JUNE 2003) (41 U.S.C. 10a-10d).
- ____ (22) (i) 52.225-3, Buy American Act--North American Free Trade Agreement--Israeli Trade Act (JUNE 2003) (41 U.S.C. 10a-10d, 19 U.S.C. 3301 note, 19 U.S.C. 2112 note).
- ____ (ii) Alternate I (MAY 2002) of 52.225-3.
- ____ (iii) Alternate II (MAY 2002) of 52.225-3.
- ____ (23) 52.225-5, Trade Agreements (OCT 2003) (19 U.S.C. 2501, et seq., 19 U.S.C. 3301 note).
- ____ (24) 52.225-13, Restrictions on Certain Foreign Purchases (OCT 2003) (E.o.s, proclamations, and statutes administered by the Office of Foreign Assets Control of the Department of the Treasury).
- ____ (25) 52.225-15, Sanctioned European Union Country End Products (FEB 2000) (E.O. 12849).
- ____ (26) 52.225-16, Sanctioned European Union Country Services (FEB 2000) (E.O. 12849).
- ____ (27) 52.232-29, Terms for Financing of Purchases of Commercial Items (FEB 2002) (41 U.S.C. 255(f), 10 U.S.C. 2307(f)).
- ____ (28) 52.232-30, Installment Payments for Commercial Items (OCT 1995) (41 U.S.C. 255(f), 10 U.S.C. 2307(f)).
- ☒ (29) 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration (OCT 2003) (31 U.S.C. 3332).
- ____ (30) 52.232-34, Payment by Electronic Funds Transfer--Other than Central Contractor Registration (MAY 1999) (31 U.S.C. 3332).
- ____ (31) 52.232-36, Payment by Third Party (MAY 1999) (31 U.S.C. 3332).
- ____ (32) 52.239-1, Privacy or Security Safeguards (AUG 1996) (5 U.S.C. 552a).
- ____ (33) (i) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (APR 2003) (46 U.S.C. Appx 1241 and 10 U.S.C. 2631).
- ____ (ii) Alternate I (APR 1984) of 52.247-64.
- ____ (c) The Contractor shall comply with the FAR clauses in this paragraph (c), applicable to commercial services, that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:
[Contracting Officer check as appropriate.]
- ____ (1) 52.222-41, Service Contract Act of 1965, as Amended (MAY 1989) (41 U.S.C. 351, et seq.).
- ____ (2) 52.222-42, Statement of Equivalent Rates for Federal Hires (MAY 1989) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).
- ____ (3) 52.222-43, Fair Labor Standards Act and Service Contract Act--Price Adjustment (Multiple Year and Option Contracts) (MAY 1989) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).
- ____ (4) 52.222-44, Fair Labor Standards Act and Service Contract Act--Price Adjustment (February 2002) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).
- ____ (5) 52.222-47, SCA Minimum Wages and Fringe Benefits Applicable to Successor Contract Pursuant to Predecessor Contractor Collective Bargaining Agreements (CBA) (May 1989) (41 U.S.C. 351, et seq.).
- ____ (d) Comptroller General Examination of Record. The

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Contractor shall comply with the provisions of this paragraph (d) if this contract was awarded using other than sealed bid, is in excess of the simplified acquisition threshold, and does not contain the clause at 52.215-2, Audit and Records--Negotiation.

(1) The Comptroller General of the United States, or an authorized representative of the Comptroller General, shall have access to and right to examine any of the Contractor's directly pertinent records involving transactions related to this contract.

(2) The Contractor shall make available at its offices at all reasonable times the records, materials, and other evidence for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in FAR Subpart 4.7, Contractor Records Retention, of the other clauses of this contract. If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement. Records relating to appeals under the disputes clause or to litigation or the settlement of claims arising under or relating to this contract shall be made available until such appeals, litigation, or claims are finally resolved.

(3) As used in this clause, records include books, documents, accounting procedures and practices, and other data, regardless of type and regardless of form. This does not require the Contractor to create or maintain any record that the Contractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e)(1) Notwithstanding the requirements of the clauses in paragraphs (a), (b), (c), and (d) of this clause, the Contractor is not required to flow down any FAR clause, other than those in paragraphs (i) through (vi) of this paragraph in a subcontract for commercial items. Unless otherwise indicated below, the extent of the flow down shall be as required by the clause--

(i) 52.219-8, Utilization of Small Business Concerns (October 2000) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$500,000 (\$1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(ii) 52.222-26, Equal Opportunity (April 2002) (E.O. 11246).

(iii) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (December 2001) (38 U.S.C. 4212).

(iv) 52.222-36, Affirmative Action for Workers with Disabilities (June 1998) (29 U.S.C. 793).

(v) 52.222-41, Service Contract Act of 1965, as Amended (May 1989), flow down required for all subcontracts subject to the Service Contract Act of 1965 (41 U.S.C. 351, et seq.).

(vi) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (April 2003) (46 U.S.C. Appx 1241 and 10 U.S.C. 2631). Flow down required in accordance with paragraph (d) of FAR clause 52.247-64.

(2) While not required, the contractor May include in its subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

252.212-7001 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS APPLICABLE TO DEFENSE ACQUISITIONS OF COMMERCIAL ITEMS (OCT 2003)

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(a) The contractor agrees to comply with the following Federal Acquisition Regulation (FAR) clause which, if checked, is included in this contract by reference to implement a provision of law applicable to acquisitions of commercial items or components.

☐ 52.203-3 Gratuities (APR 1984) (10 U.S.C. 2207)

(b) The Contractor agrees to comply with any clause that is checked on the following list of Defense FAR Supplement clauses which, if checked, is included in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items or components.

- ☐ 252.205-7000 Provision of Information to Cooperative Agreement Holders (DEC 1991) (10 U.S.C. 2416).
- ☐ 252.219-7003 Small Disadvantaged and Women-Owned Small Business Subcontracting Plan (DoD Contracts) (APR 1996) (15 U.S.C. 637).
- ☐ 252.219-7004 Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan (Test Program) (JUN 1997) (15 U.S.C. 637 Note).
- ☒ 252.225-7001 Buy American Act and Balance of Payments Program (APR 2003) (41 U.S.C. 10a-10d, E.O. 10582).
- ☐ 252.225-7012 Preference for Certain Domestic Commodities (FEB 2003) (10 U.S.C. 2533a).
- ☐ 252.225-7014 Preference for Domestic Specialty Metals (APR 2003) (10 U.S.C. 2533a).
- ☐ 252.225-7015 Restriction on Acquisition of Hand or Measuring Tools (APR 2003) (10 U.S.C. 2533a).
- ☐ 252.225-7016 Restriction on Acquisition of Ball and Roller Bearings (APR 2003) (☐ Alternate I) (APR 2003) (10 U.S.C. 2534 and Section 8099 of Pub. L. 104-61) and similar sections in subsequent DoD appropriations acts).
- ☐ 252.225-7021 Trade Agreements (AUG 2003) (19 U.S.C. 2501-2518 and 19 U.S.C. 3301 note).
- ☐ 252.225-7027 Restriction on Contingent Fees for Foreign Military Sales (APR 2003) (22 U.S.C. 2779).
- ☐ 252.225-7028 Exclusionary Policies and Practices of Foreign Governments (APR 2003) (22 U.S.C. 2755).
- ☐ 252.225-7036 Buy American Act--North American Free Trade Agreement Implementation Act--Balance of Payments Program (APR 2003) (☐ Alternate I) (APR 2003) (41 U.S.C. 10a-10d and 19 U.S.C. 3301 note).
- ☐ 252.225-7038 Restriction on Acquisition of Air Circuit Breakers (APR 2003) (10 U.S.C. 2534(a)(3)).
- ☐ 252.226-7001 Utilization of Indian Organizations, Indian-Owned Economic Enterprises, and Native Hawaiian Small Business Concerns (OCT 2003) (Section 8021 of Pub. L. 107-248).
- ☐ 252.227-7015 Technical Data--Commercial Items (NOV 1995) (10 U.S.C. 2320).
- ☐ 252.227-7037 Validation of Restrictive Markings on Technical Data (SEP 1999) (10 U.S.C. 2321).
- ☐ 252.232-7003 Electronic Submission of Payment Requests (MAR 2003) (10 U.S.C. 2227).
- ☐ 252.243-7002 Requests for Equitable Adjustment (MAR 1998) (10 U.S.C. 2410).
- ☐ 252.247-7023 Transportation of Supplies by Sea (MAY 2002) (☐ Alternate I) (MAR 2000) (☐ Alternate II) (MAR 2000) (Alternate III) (MAY 2002) (10 U.S.C. 2631).
- ☐ 252.247-7024 Notification of Transportation of Supplies by Sea (MAR 2000) (10 U.S.C. 2631).

(c) In addition to the clauses listed in paragraph (e) of

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the Contract Terms and Conditions Required to Implement Statutes or Executive Orders--Commercial Items clause of this contract (FAR 52.212-5), the Contractor shall include the terms of the following clauses, if applicable, in subcontracts for commercial items or commercial components, awarded at any tier under this contract:

- 252.225-7014 Preference for Domestic Specialty Metals, Alternate I (APR 2003) (10 U.S.C. 2533a).
- 252.247-7023 Transportation of Supplies by Sea (MAY 2002) (10 U.S.C. 2631)
- 252.247-7024 Notification of Transportation of Supplies by Sea (MAR 2000) (10 U.S.C. 2631).

52.212-1 INSTRUCTIONS TO OFFERORS--COMMERCIAL ITEMS (OCT 2003)

(a) North American Industry Classification System (NAICS) code and small business size standard. The NAICS code and small business size standard for this acquisition appear in Block 10 of the solicitation cover sheet (SF 1449). However, the small business size standard for a concern which submits an offer in its own name, but which proposes to furnish an item which it did not itself manufacture, is 500 employees.

(b) Submission of offers. Submit signed and dated offers to the office specified in this solicitation at or before the exact time specified in this solicitation. Offers may be submitted on the SF 1449, letterhead stationery, or as otherwise specified in the solicitation. As a minimum, offers must show--

- (1) The solicitation number;
- (2) The time specified in the solicitation for receipt of offers;

(3) The name, address, and telephone number of the offeror;

(4) A technical description of the items being offered in sufficient detail to evaluate compliance with the requirements in the solicitation. This may include product literature, or other documents, if necessary;

(5) Terms of any express warranty;

(6) Price and any discount terms;

(7) "Remit to" address, if different than mailing address;

(8) A completed copy of the representations and certifications at FAR 52.212-3;

(9) Acknowledgment of Solicitation Amendments;

(10) Past performance information, when included as an evaluation factor, to include recent and relevant contracts for the same or similar items and other references (including contract numbers, points of contact with telephone numbers and other relevant information); and

(11) If the offer is not submitted on the SF 1449, include a statement specifying the extent of agreement with all terms, conditions, and provisions included in the solicitation. Offers that fail to furnish required representations or information, or reject the terms and conditions of the solicitation may be excluded from consideration.

(c) Period for acceptance of offers. The offeror agrees to hold the prices in its offer firm for 30 calendar days from the date specified for receipt of offers, unless another time period is specified in an addendum to the solicitation.

(d) Product samples. When required by the solicitation, product samples shall be submitted at or prior to the time specified for receipt of offers. Unless otherwise specified in

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this solicitation, these samples shall be submitted at no expense to the Government, and returned at the sender's request and expense, unless they are destroyed during preaward testing.

(e) Multiple offers. Offerors are encouraged to submit multiple offers presenting alternative terms and conditions or commercial items for satisfying the requirements of this solicitation. Each offer submitted will be evaluated separately.

(f) Late submissions, modifications, revisions, and withdrawals of offers. (1) Offerors are responsible for submitting offers, and any modifications, revisions, or withdrawals, so as to reach the Government office designated in the solicitation by the time specified in the solicitation. If no time is specified in the solicitation, the time for receipt is 4:30 p.m., local time, for the designated Government office on the date that offers or revisions are due.

(2) (i) Any offer, modification, revision, or withdrawal of an offer received at the Government office designated in the solicitation after the exact time specified for receipt of offers is "late" and will not be considered unless it is received before award is made, the Contracting Officer determines that accepting the late offer would not unduly delay the acquisition; and--

(A) If it was transmitted through an electronic commerce method authorized by the solicitation, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of offers; or

(B) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of offers and was under the Government's control prior to the time set for receipt of offers; or

(C) If this solicitation is a request for proposals, it was the only proposal received.

(ii) However, a late modification of an otherwise successful offer, that makes its terms more favorable to the Government, will be considered at any time it is received and may be accepted.

(3) Acceptable evidence to establish the time of receipt at the Government installation includes the time/date stamp of that installation on the offer wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

(4) If an emergency or unanticipated event interrupts normal Government processes so that offers cannot be received at the Government office designated for receipt of offers by the exact time specified in the solicitation, and urgent Government requirements preclude amendment of the solicitation or other notice of an extension of the closing date, the time specified for receipt of offers will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.

(5) Offers may be withdrawn by written notice received at any time before the exact time set for receipt of offers. Oral offers in response to oral solicitations may be withdrawn orally. If the solicitation authorizes facsimile offers, offers may be withdrawn via facsimile received at any time before the exact time set for receipt of offers, subject to the conditions specified in the solicitation concerning facsimile offers. An offer may be withdrawn in person by an offeror or its authorized representative if, before the exact time set for receipt of offers, the identity of the person requesting

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withdrawal is established and the person signs a receipt for the offer.

(g) Contract award (not applicable to Invitation for Bids). The Government intends to evaluate offers and award a contract without discussions with offerors. Therefore, the offeror's initial offer should contain the offeror's best terms from a price and technical standpoint. However, the Government reserves the right to conduct discussions if later determined by the Contracting Officer to be necessary. The Government may reject any or all offers if such action is in the public interest; accept other than the lowest offer; and waive informalities and minor irregularities in offers received.

(h) Multiple awards. The Government may accept any item or group of items of an offer, unless the offeror qualifies the offer by specific limitations. Unless otherwise provided in the Schedule, offers may not be submitted for quantities less than those specified. The Government reserves the right to make an award on any item for a quantity less than the quantity offered, at the unit prices offered, unless the offeror specifies otherwise in the offer.

(i) Availability of requirements documents cited in the solicitation. (1)(i) The GSA Index of Federal Specifications, Standards and Commercial Item Descriptions, FPMR Part 101-29, and copies of specifications, standards, and commercial item descriptions cited in this solicitation may be obtained for a fee by submitting a request to--

GSA Federal Supply Service Specifications Section
Suite 8100
470 East L'Enfant Plaza, SW
Washington, DC 20407

Telephone (202) 619-8925
Facsimile (202) 619-8978.

(ii) If the General Services Administration, Department of Agriculture, or Department of Veterans Affairs issued this solicitation, a single copy of specifications, standards, and commercial item descriptions cited in this solicitation may be obtained free of charge by submitting a request to the addressee in paragraph (i)(1)(i) of this provision. Additional copies will be issued for a fee.

(2) The DoD Index of Specifications and Standards (DoDISS) and documents listed in it may be obtained from the--

Department of Defense Single Stock Point (DoDSSP)
Building 4, Section D
700 Robbins Avenue
Philadelphia, PA 19111-5094

Telephone (215) 697-2667/2179
Facsimile (215) 697-1462.

(i) Automatic distribution may be obtained on a subscription basis.

(ii) Order forms, pricing information, and customer support information may be obtained--

(A) By telephone at (215) 697-2667/2179; or

(B) Through the DoDSSP Internet site at <http://dodssp.daps.mil>.

(3) Nongovernment (voluntary) standards must be obtained from the organization responsible for their preparation, publication, or maintenance.

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(j) Data Universal Numbering System (DUNS) Number. (Applies to all offers exceeding \$25,000, and offers of \$25,000 or less if the solicitation requires the Contractor to be registered in the Central Contractor Registration (CCR) database. The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation "DUNS" or "DUNS +4" followed by the DUNS or DUNS +4 number that identifies the offeror's name and address. The DUNS +4 is the DUNS number plus a 4-character suffix that may be assigned at the discretion of the offeror to establish additional CCR records for identifying alternative Electronic Funds Transfer (EFT) accounts (see FAR Subpart 32.11) for the same parent concern. If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one. An offeror within the United States may contact Dun and Bradstreet by calling 1-866-705-5711 or via the internet at <http://www.dnb.com>. An offeror located outside the United States must contact the local Dun and Bradstreet office for a DUNS number.

(k) Central Contractor Registration. Unless exempted by an addendum to this solicitation, by submission of an offer, the offeror acknowledges the requirement that a prospective awardee shall be registered in the CCR database prior to award, during performance and through final payment of any contract resulting from this solicitation. If the Offeror does not become registered in the CCR database in the time prescribed by the Contracting Officer, the Contracting Officer will proceed to award to the next otherwise successful registered Offeror. Offerors may obtain information on registration and annual confirmation requirements via the Internet at <http://www.ccr.gov> or by calling 1-888-227-2423 or 269-961-5757.

52.212-3 OFFEROR REPRESENTATIONS AND CERTIFICATIONS-
COMMERCIAL ITEMS (JUN 2003)--ALTERNATE I (APR 2002)

(a) Definitions. As used in this provision:

"Emerging small business" means a small business concern whose size is no greater than 50 percent of the numerical size standard for the NAICS code designated.

"Forced or indentured child labor" means all work or service--

(1) Exacted from any person under the age of 18 under the menace of any penalty for its nonperformance and for which the worker does not offer himself voluntarily; or

(2) Performed by any person under the age of 18 pursuant to a contract the enforcement of which can be accomplished by process or penalties.

"Service-disabled veteran-owned small business concern"--

(1) Means a small business concern--

(i) Not less than 51 percent of which is owned by one or more service--disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

"Small business concern" means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under

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the criteria in 13 CFR part 121 and size standards in this solicitation.

"Veteran-owned small business concern" means a small business concern--

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

"Women-owned small business concern" means a small business concern--

(1) That is at least 51 percent owned by one or more women; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

"Women-owned business concern" means a concern which is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

(b) Taxpayer Identification Number (TIN) (26 U.S.C. 6109, 31 U.S.C. 7701). (Not applicable if the offeror is required to provide this information to a central contractor registration database to be eligible for award.)

(1) All offerors must submit the information required in paragraphs (b)(3) through (b)(5) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the Internal Revenue Service (IRS).

(2) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(3) Taxpayer Identification Number (TIN).

- ☐ TIN: _____.
- ☐ TIN has been applied for.
- ☐ TIN is not required because:

☐ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;

☐ Offeror is an agency or instrumentality of a foreign government;

☐ Offeror is an agency or instrumentality of the Federal Government.

(4) Type of organization.

- ☐ Sole proprietorship;
- ☐ Partnership;
- ☐ Corporate entity (not tax-exempt);
- ☐ Corporate entity (tax-exempt);
- ☐ Government entity (Federal, State, or local);
- ☐ Foreign government;
- ☐ International organization per 26 CFR 1.6049-4;

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- ☐ Other _____.
- (5) Common parent.
- ☐ Offeror is not owned or controlled by a common parent;
- ☐ Name and TIN of common parent:
- Name _____.
- TIN _____.

(c) Offerors must complete the following representations when the resulting contract will be performed in the United States or its outlying areas. Check all that apply.

(1) Small business concern. The offeror represents as part of its offer that it ☐ is, ☐ is not a small business concern.

(2) Veteran-owned small business concern. [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents as part of its offer that it ☐ is, ☐ is not a veteran-owned small business concern.

(3) Service-disabled veteran-owned small business concern. [Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (c)(2) of this provision.] The offeror represents as part of its offer that it ☐ is, ☐ is not a service-disabled veteran-owned small business concern.

(4) Small disadvantaged business concern. [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents, for general statistical purposes, that it ☐ is, ☐ is not a small disadvantaged business concern as defined in 13 CFR 124.1002.

(5) Women-owned small business concern. [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents that it ☐ is, ☐ is not a women-owned small business concern. Note: Complete paragraphs (c)(6) and (c)(7) only if this solicitation is expected to exceed the simplified acquisition threshold.

(6) Women-owned business concern (other than small business concern). [Complete only if the offeror is a women-owned business concern and did not represent itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents that it ☐ is a women-owned business concern.

(7) Tie bid priority for labor surplus area concerns. If this is an invitation for bid, small business offerors may identify the labor surplus areas in which costs to be incurred on account of manufacturing or production (by offeror or first-tier subcontractors) amount to more than 50 percent of the contract price:

(8) Small Business Size for the Small Business Competitiveness Demonstration Program and for the Targeted Industry Categories under the Small Business Competitiveness Demonstration Program. [Complete only if the offeror has represented itself to be a small business concern under the size standards for this solicitation.]

(i) (Complete only for solicitations indicated in an addendum as being set-aside for emerging small businesses in one of the four designated industry groups (DIGs).) The offeror represents as part of its offer that it ☐ is, ☐ is not an emerging small business.

(ii) (Complete only for solicitations indicated in an addendum as being for one of the targeted industry categories (TICs) or four designated industry groups (DIGs).) Offeror represents as follows:

(A) Offeror's number of employees for the past 12

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months (check the Employees column if size standard stated in the solicitation is expressed in terms of number of employees); or

(B) Offeror's average annual gross revenue for the last 3 fiscal years (check the Average Annual Gross Number of Revenues column if size standard stated in the solicitation is expressed in terms of annual receipts).

(Check one of the following):

Number of Employees	Average Annual Gross Revenues
<input type="checkbox"/> 50 or fewer	<input type="checkbox"/> \$1 million or less
<input type="checkbox"/> 51--100	<input type="checkbox"/> \$1,000,001--\$2 million
<input type="checkbox"/> 101--250	<input type="checkbox"/> \$2,000,001--\$3.5 million
<input type="checkbox"/> 251--500	<input type="checkbox"/> \$3,500,001--\$5 million
<input type="checkbox"/> 501--750	<input type="checkbox"/> \$5,000,001--\$10 million
<input type="checkbox"/> 751--1,000	<input type="checkbox"/> \$10,000,001--\$17 million
<input type="checkbox"/> Over 1,000	<input type="checkbox"/> Over \$17 million

(9) (Complete only if the solicitation contains the clause at FAR 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns, or FAR 52.219-25, Small Disadvantaged Business Participation Program--Disadvantaged Status and Reporting, and the offeror desires a benefit based on its disadvantaged status.)

(i) General. The offeror represents that either--

(A) It ☐ is, ☐ is not certified by the Small Business Administration as a small disadvantaged business concern and identified, on the date of this representation, as a certified small disadvantaged business concern in the database maintained by the Small Business Administration (PRO-Net), and that no material change in disadvantaged ownership and control has occurred since its certification, and, where the concern is owned by one or more individuals claiming disadvantaged status, the net worth of each individual upon whom the certification is based does not exceed \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); or

(B) It ☐ has, ☐ has not submitted a completed application to the Small Business Administration or a Private Certifier to be certified as a small disadvantaged business concern in accordance with 13 CFR 124, Subpart B, and a decision on that application is pending, and that no material change in disadvantaged ownership and control has occurred since its application was submitted.

(ii) ☐ Joint Ventures under the Price Evaluation Adjustment for Small Disadvantaged Business Concerns. The offeror represents, as part of its offer, that it is a joint venture that complies with the requirements in 13 CFR 124.1002(f) and that the representation in paragraph (c)(9)(i) of this provision is accurate for the small disadvantaged business concern that is participating in the joint venture. [The offeror shall enter the name of the small disadvantaged business concern that is participating in the joint venture: _____.]

(10) HUBZone small business concern. [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents, as part of its offer, that--

(i) It ☐ is, ☐ is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in

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ownership and control, principal office, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR part 126; and
(ii) It ☐ is, ☐ is not a joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (c)(10)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating in the joint venture. [The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture:_____] Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(11) (Complete if the offeror has represented itself as disadvantaged in paragraph (c)(4) or (c)(9) of this provision.) The offeror shall check the category in which its ownership falls:

☐ Black American.
☐ Hispanic American.
☐ Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians).
☐ Asian-Pacific American (persons with origins from Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Japan, China, Taiwan, Laos, Cambodia (Kampuchea), Vietnam, Korea, The Philippines, U.S. Trust Territory or the Pacific Islands (Republic of Palau), Republic of the Marshall Islands, Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, Guam, Samoa, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru).
☐ Subcontinent Asian (Asian-Indian) American (persons with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal).

☐ Individual/concern, other than one of the preceding.
(11) HUBZone small business concern. [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents as part of its offer that--

(i) It ☐ is, ☐ is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns Maintained by the Small Business Administration, and no material change in ownership and control, principal place of ownership, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR part 126; and

(ii) It ☐ is, ☐ is not a joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (c)(11)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating on the joint venture. [The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture:_____] Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(d) Representations required to implement provisions of Executive Order 11246--

(1) Previous contracts and compliance. The offeror represents that--

(i) It ☐ has, ☐ has not participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation; and

(ii) It ☐ has, ☐ has not filed all required compliance reports.

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(2) Affirmative Action Compliance. The offeror represents that--

(i) It [] has developed and has on file, [] has not developed and does not have on file, at each establishment, affirmative action programs required by rules and regulations of the Secretary of Labor (41 CFR parts 60-1 and 60-2), or

(ii) It [] has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

(e) Certification Regarding Payments to Influence Federal Transactions (31 U.S.C. 1352). (Applies only if the contract is expected to exceed \$100,000.) By submission of its offer, the offeror certifies to the best of its knowledge and belief that no Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress or an employee of a Member of Congress on his or her behalf in connection with the award of any resultant contract.

(f) Buy American Act Certificate. (Applies only if the clause at Federal Acquisition Regulation (FAR) 52.225-1, Buy American Act--Supplies, is included in this solicitation.)

(1) The offeror certifies that each end product, except those listed in paragraph (f)(2) of this provision, is a domestic end product and that the offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States. The offeror shall list as foreign end products those end products manufactured in the United States that do not qualify as domestic end products. The terms "component," "domestic end product," "end product," "foreign end product," and "United States" are defined in the clause of this solicitation entitled "Buy American Act--Supplies."

(2) Foreign End Products:

Line Item No	Country of Origin
_____	_____
_____	_____
_____	_____

(List as necessary)

(3) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25.

(g)(1) Buy American Act--North American Free Trade Agreement--Israeli Trade Act Program Certificate. (Applies only if the clause at FAR 52.225-3, Buy American Act--North American Free Trade Agreement--Israeli Trade Act, is included in this solicitation.)

(i) The offeror certifies that each end product, except those listed in paragraph (g)(1)(ii) or (g)(1)(iii) of this provision, is a domestic end product and that the offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States. The terms "component," "domestic end product," "end product," "foreign end product," and "United States" are defined in the clause of this solicitation entitled "Buy American Act--North American Free Trade Agreement--Israeli Trade Act."

(ii) The offeror certifies that the following supplies are NAFTA country end products or Israeli end products as defined in the clause of this solicitation entitled "Buy American Act--North American Free Trade Agreement--Israeli Trade Act":

NAFTA Country or Israeli End Products:

Line Item No	Country of Origin
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VENDOR:

(List as necessary)

(iii) The offeror shall list those supplies that are foreign end products (other than those listed in paragraph (g)(1)(ii) of this provision) as defined in the clause of this solicitation entitled "Buy American Act--North American Free Trade Agreement--Israeli Trade Act." The offeror shall list as other foreign end products those end products manufactured in the United States that do not qualify as domestic end products.

Other Foreign End Products:

Line Item No	Country of Origin
_____	_____
_____	_____
_____	_____

(List as necessary)

(iv) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25.

(2) Buy American Act--North American Free Trade Agreements--Israeli Trade Act Certificate, Alternate I (May 2002). If Alternate I to the clause at FAR 52.225-3 is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

(g)(1)(ii) The offeror certifies that the following supplies are Canadian end products as defined in the clause of this solicitation entitled "Buy American Act--North American Free Trade Agreement--Israeli Trade Act":

Canadian End Products:

Line Item No.

(List as necessary)

(3) Buy American Act--North American Free Trade Agreements--Israeli Trade Act Certificate, Alternate II (May 2002). If Alternate II to the clause at FAR 52.225-3 is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

(g)(1)(ii) The offeror certifies that the following supplies are Canadian end products or Israeli end products as defined in the clause of this solicitation entitled "Buy American Act--North American Free Trade Agreement--Israeli Trade Act":

Canadian or Israeli End Products:

Line Item No	Country of Origin
_____	_____
_____	_____
_____	_____

(List as necessary)

(4) Trade Agreements Certificate. (Applies only if the clause at FAR 52.225-5, Trade Agreements, is included in this solicitation.)

(i) The offeror certifies that each end product, except those

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listed in paragraph (g)(4)(ii) of this provision, is a U.S.-made, designated country, Caribbean Basin country, or NAFTA country end product, as defined in the clause of this solicitation entitled "Trade Agreements."

(ii) The offeror shall list as other end products those end products that are not U.S.-made, designated country, Caribbean Basin country, or NAFTA country end products.

Other End Products:

Line Item No	Country of Origin
_____	_____
_____	_____
_____	_____

(List as necessary)

(iii) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25. For line items subject to the Trade Agreements Act, the Government will evaluate offers of U.S.-made, designated country, Caribbean Basin country, or NAFTA country end products without regard to the restrictions of the Buy American Act. The Government will consider for award only offers of U.S.-made, designated country, Caribbean Basin country, or NAFTA country end products unless the Contracting Officer determines that there are no offers for such products or that the offers for such products are insufficient to fulfill the requirements of the solicitation.

(h) Certification Regarding Debarment, Suspension or Ineligibility for Award (Executive Order 12549). (Applies only if the contract value is expected to exceed the simplified acquisition threshold.) The offeror certifies, to the best of its knowledge and belief, that the offeror and/or any of its principals--

(1) ☐ Are, ☐ are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(2) ☐ Have, ☐ have not, within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a Federal, state or local government contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(3) ☐ Are, ☐ are not presently indicted for, or otherwise criminally or civilly charged by a Government entity with, commission of any of these offenses.

(i) Certification Regarding Knowledge of Child Labor for Listed End Products (Executive Order 13126). [The Contracting Officer must list in paragraph (i)(1) any end products being acquired under this solicitation that are included in the List of Products Requiring Contractor Certification as to Forced or Indentured Child Labor, unless excluded at 22.1503(b).]

(1) Listed end products.

Listed End Product

Listed Countries of Origin

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(2) Certification. [If the Contracting Officer has identified end products and countries of origin in paragraph (i)(1) of this provision, then the offeror must certify to either (i)(2)(i) or (i)(2)(ii) by checking the appropriate block.]

☐ (i) The offeror will not supply any end product listed in paragraph (i)(1) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product.

☐ (ii) The offeror may supply an end product listed in paragraph (i)(1) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product. The offeror certifies that it has made a good faith effort to determine whether forced or indentured child labor was used to mine, produce, or manufacture any such end product furnished under this contract. On the basis of those efforts, the offeror certifies that it is not aware of any such use of child labor.

(End of provision)

52.217-7 -- Option for Increased Quantity -- Separately Priced Line Item.

As prescribed in 17.208(e), insert a clause substantially the same as the following:

Option for Increased Quantity -- Separately Priced Line Item (Mar 1989)

The Government may require the delivery of the numbered line item, identified in the Schedule as an option item, in the quantity and at the price stated in the Schedule. The Contracting Officer may exercise the option by written notice to the Contractor within the following schedule:

ITEM

0002 within one year after date of order.

0003 within two years after date of order.

0004 within three years after date of order.

0005 within four years after date of order.

Delivery of added items shall continue at the same rate that like items are called for under the contract, unless the parties otherwise agree.

(End of Clause)

52.209-3 -- First Article Approval -- Contractor Testing.

First Article Approval -- Contractor Testing (Sep 1989)

(a) The Contractor shall test 1 unit of Item 0006 as specified in this contract. At least 30 calendar days before the beginning of first article tests, the Contractor shall notify the Contracting Officer, in writing, of the time and location of the testing so that the Government may witness the tests.

(b) The Contractor shall submit the first article test report within 150 calendar days from the date of this contract to NSWCCD, Philadelphia, 5001 South Broad Street, Code 955, Philadelphia, PA 19112, Attn: Michael Gray, marked "First Article Test Report: Contract No. (To Be Assigned), Item No.0007" Within 30 calendar days after the Government receives the test report, the Contracting Officer shall notify the Contractor, in writing, of the conditional approval, approval, or disapproval of the first article. The notice of conditional approval or approval shall not relieve the Contractor from complying with all requirements of the specifications and all other terms and conditions of this contract. A notice of conditional approval shall state any further action required of the Contractor. A notice of disapproval shall cite reasons for the disapproval.

(c) If the first article is disapproved, the Contractor, upon Government request, shall repeat any or all first article tests. After each request for additional tests, the Contractor shall make any necessary changes, modifications, or repairs to the first article or select another first article for testing. All costs related to these tests are to be borne by the Contractor, including any and all costs for additional tests following a disapproval. The Contractor shall then conduct the tests and deliver another report to the Government under the terms and conditions and within the time specified by the Government. The Government shall take action on this report within the time specified in paragraph (b) above. The Government reserves the right to require an equitable adjustment of the contract price for any extension of the delivery schedule, or for any additional costs to the Government related to these tests.

(d) If the Contractor fails to deliver any first article report on time, or the Contracting Officer disapproves any first article, the Contractor shall be deemed to have failed to make delivery within the meaning of the Default clause of this contract.

(e) Unless otherwise provided in the contract, and if the approved first article is not consumed or destroyed in testing, the Contractor may deliver the approved first article as part of the contract quantity if it meets all contract requirements for acceptance.

(f) If the Government does not act within the time specified in paragraph (b) or (c) above, the Contracting Officer shall, upon timely written request from the Contractor, equitably adjust under the changes clause of this contract the delivery or performance dates and/or the contract price, and any other contractual term affected by the delay.

(g) Before first article approval, the acquisition of materials or components for, or the commencement of production of, the balance of the contract quantity is at the sole risk of the Contractor. Before first article approval, the costs thereof shall not be allocable to this contract for

(1) progress payments, or

(2) termination settlements if the contract is terminated for the convenience of the Government.

(h) The Government may waive the requirement for first article approval test where supplies identical or similar to those called for in the schedule have been previously furnished by the offeror/contractor and have been accepted by the Government. The offeror/contractor may request a waiver.

(End of Clause)

52.209-4 -- First Article Approval -- Government Testing.

First Article Approval -- Government Testing (Sep 1989)

(a) The Contractor shall deliver 1 unit of Item 0006 within 190 calendar days from the date of this contract to the Government at NSWCCD, Philadelphia, 5001 South Broad Street, Code 955, Philadelphia, PA 19112, Attn: Michael Gray for first article tests. The shipping documentation shall contain this contract number and the Item identification. The characteristics that the first article must meet and the testing requirements are specified elsewhere in this contract.

(b) Within 30 calendar days after the Government receives the first article, the Contracting Officer shall notify the Contractor, in writing, of the conditional approval, approval, or disapproval of the first article. The notice of conditional approval or approval shall not relieve the Contractor from complying with all requirements of the specifications and all other terms and conditions of this contract. A notice of conditional approval shall state any further action required of the Contractor. A notice of disapproval shall cite reasons for the disapproval.

(c) If the first article is disapproved, the Contractor, upon Government request, shall submit an additional first article for testing. After each request, the Contractor shall make any necessary changes, modifications, or repairs to the first article or select another first article for testing. All costs related to these tests are to be borne by the Contractor, including any and all costs for additional tests following a disapproval. The Contractor shall furnish any additional first article to the Government under the terms and conditions and within the time specified by the Government. The Government shall act on this first article within the time limit specified in paragraph (b) of this clause. The Government reserves the right to require an equitable adjustment of the contract price for any extension of the delivery schedule or for any additional costs to the Government related to these tests.

(d) If the Contractor fails to deliver any first article on time, or the Contracting Officer disapproves any first article, the Contractor shall be deemed to have failed to make delivery within the meaning of the Default clause of this contract.

(e) Unless otherwise provided in the contract, the Contractor --

(1) May deliver the approved first article as a part of the contract quantity, provided it meets all contract requirements for acceptance and was not consumed or destroyed in testing; and

(2) Shall remove and dispose of any first article from the Government test facility at the Contractor's expense.

(f) If the Government does not act within the time specified in paragraph (b) or (c) of this clause, the Contracting Officer shall, upon timely written request from the Contractor, equitably adjust under the Changes clause of this contract the delivery or performance dates and/or the contract price, and any other contractual term affected by the delay.

(g) The Contractor is responsible for providing operating and maintenance instructions, spare parts support, and repair of the first article during any first article test.

(h) Before first article approval, the acquisition of materials or components for, or the commencement of production of, the balance of the contract quantity is at the sole risk of the Contractor. Before first article approval, the costs thereof shall not be allocable to this contract for

(1) progress payments, or

(2) termination settlements if the contract is terminated for the convenience of the Government.

(i) The Government may waive the requirement for first article approval test where supplies identical or similar to those called for in the schedule have been previously furnished by the Offeror/Contractor and have been accepted by the Government. The Offeror/Contractor may request a waiver.

(End of Clause)

52.247-34 -- F.o.b. - Destination.**F.o.b. Destination (Nov 1991)**

(a) The term "f.o.b. destination," as used in this clause, means --

(1) Free of expense to the Government, on board the carrier's conveyance, at a specified delivery point where the consignee's facility (plant, warehouse, store, lot, or other location to which shipment can be made) is located; and

(2) Supplies shall be delivered to the destination consignee's wharf (if destination is a port city and supplies are for export), warehouse unloading platform, or receiving dock, at the expense of the Contractor. The Government shall not be liable for any delivery, storage, demurrage, accessorial, or other charges involved before the actual delivery (or "constructive placement" as defined in carrier tariffs) of the supplies to the destination, unless such charges are caused by an act or order of the Government acting in its contractual capacity. If rail carrier is used, supplies shall be delivered to the specified unloading platform of the consignee. If motor carrier (including "piggyback") is used, supplies shall be delivered to truck tailgate at the unloading platform of the consignee, except when the supplies delivered meet the requirements of Item 568 of the National Motor Freight Classification for "heavy or bulky freight." When supplies meeting the requirements of the referenced Item 568 are delivered, unloading (including movement to the tailgate) shall be performed by the consignee, with assistance from the truck driver, if requested. If the contractor uses rail carrier or freight forwarded for less than carload shipments, the contractor shall ensure that the carrier will furnish tailgate delivery, when required, if transfer to truck is required to complete delivery to consignee.

(b) The Contractor shall --

(1)

(i) Pack and mark the shipment to comply with contract specifications; or

(ii) In the absence of specifications, prepare the shipment in conformance with carrier requirements;

(2) Prepare and distribute commercial bills of lading;

(3) Deliver the shipment in good order and condition to the point of delivery specified in the contract;

(4) Be responsible for any loss of and/or damage to the goods occurring before receipt of the shipment by the consignee at the delivery point specified in the contract;

(5) Furnish a delivery schedule and designate the mode of delivering carrier; and

(6) Pay and bear all charges to the specified point of delivery.

(End of Clause)

**TECHNICAL SPECIFICATION FOR
REPLACEMENT DISPLAY UNIT
USED ON
DDG 51 THRU 82 DDG AND AOE CLASS
MACHINERY CONTROL CONSOLES**

1. INTRODUCTION

- 1.1. This specification establishes requirements for the furnishing of a commercially available Display Unit as a form, fit and function replacement for current DDG Machinery Control Consoles Plasma Display Units, utilizing existing power supply and connections.

2. PANEL DISPLAY DESIGN REQUIREMENTS

- 2.1. The Panel Unit will be used on DDG 51 through 82 and AOE Class Machinery Control Consoles in accordance with the following requirements:
 - a) Commercial Display Unit adapted for the DDG and AOE Class Machinery Control Consoles using techniques and processes available in the commercial marketplace.
 - b) The proposed Display Unit design shall replace an 8 inch X 8 inch AC Plasma Display Unit head assembly that emulates a medium performance CRT type terminal with alpha-graphic capabilities. The proposed Display Unit will utilize existing power and data input cables and meet size and mounting specifications such that the proposed display is a form, fit, function replacement for existing display.
 - c) The Display Unit will be adapted to interface with the existing control system components and will be tested at the Land Based Engineering Station (LBES) platform.
- 2.2. Detailed specifications for current Plasma Display Unit are contained in Lockheed Martin-formerly General Electric-Specification for Plasma Display, 63A141835 Rev P. Existing power supply unit (PSU) and keyboard will be utilized. Specifications for PSU and keyboard are included in above referenced specification; para's 3.28 and 3.29 apply.

3. FIRST ARTICLE TESTING

- 3.1. Testing will be accomplished on the first article delivered to ensure it is an acceptable replacement for current Plasma Display Unit and functions as intended in the DDG/AOE Machinery Controls System (MCS). This testing will be accomplished by both the contractor and Government.
- 3.2. Contractor Testing
 - a) Contractor shall perform Vibration/Shock/EMI Testing on First Article Panel Display Unit in accordance with Sections 3.3.5.3, 3.3.5.4, 3.3.5.8, respectively, of the Lockheed Martin-formerly General Electric-Specification for Plasma Display, 63A141835 Rev P. Contractor shall submit a test report detailing the results of the Vibration/Shock/EMI testing performed. In accordance with above specification.

3.3. Government Testing

- a) Upon completion of the tests by the contractor described in par. 4.2, the contractor shall deliver the First Article Test to the Government. The Government will test First Article in NSWCCD, Phila. test facility. Testing will be accomplished by installing first article in the DDG machinery Control System consoles. NSWCCD will ensure physical mounting in MCS console panels and power supply/data connections are acceptable. In addition, functionality testing will be performed to ensure: keyboard functions verification and display control, visual parameters, display screen characteristics and alphanumeric display. In addition, the Government will perform any other examination or inspection it deems necessary to determine compliance with the specification requirements. The First Article sample will be retained by the Government and shall not be considered one of the production units covered by Item 0001.

4. DOCUMENTATION

- 4.1. The contractor shall provide a commercial Technical Manual detailing operation, maintenance and parts breakdown.
- 4.2. Contractor shall provide software source files and tools required for software developed for replacement display unit.
- 4.3. Contractor shall provide Engineering Data For Provisioning for parts and assemblies to the detail of Level 2 drawings. Drawings will be utilized for provisioning replacement display unit and monitoring obsolescence of components.
- 4.4. First Article Contractor Test Report including Vibration/Shock/EMI Testing Reports.

5. DATA RIGHTS

- 5.1. The Government shall have the right to use, modify, reproduce, release, perform or disclose "technical data" (as defined in clause (a)(14) of DFAR 252.227-7013(NOV 1995)), "commercial computer software" (as defined in clause (a)(1) of DFARS 252.227-7014 (JUNE 1995)) and "noncommercial computer software" (as defined in clause (a)(13) of DFARS 252-227-7014 (JUNE 1995)) developed under this Agreement for Government purposes such as the evaluation, installation, operation, maintenance, repair and modification (but not competitive procurement or manufacture) of the Display Panel.
- 5.2. In addition, the Government shall have unlimited rights in technical data that: are form, fit and function data (as defined in clause (a)(10) of DFARS 252.227-7013 (NOV 1995); are corrections or changes to technical data furnished to the Contractor by the Government; are instructional material; or, the Government has obtained unlimited rights under another Government contract or as a result of negotiations.

5.3. Rights to Commercial Technical Data, Commercial Computer Software, and Commercial Computer Software Documentation Developed Outside of this Agreement

- a) Contractor will ensure that all licenses needed for the use of Commercial Technical Data (CTD), Commercial Computer Software (CCS), and Commercial Computer Software Documentation (CCSD) delivered (but not developed) under this Agreement are supplied to the Government. The Government's rights in CTD incorporated into deliverables under the Agreement shall be determined in accordance with DFARS 252-227-7015, "Technical Data – Commercial Items (Nov 1995)," which is hereby incorporated by reference. The Government shall have the rights specified in the license customarily provided to the public, a copy of which shall be provided to the Government, in all CCS and CCSD incorporated into the deliverable under this Agreement. All such CCS and CCSD software shall be marked with appropriate restrictive markings in accordance with best commercial practices.

6. ENCLOSURE

General Electric Company Specification Control Drawing 63A141835, Revision P, is provided as an enclosure to this Specification.

GENERAL  ELECTRIC

**SIMULATION AND CONTROL
SYSTEMS DEPARTMENT
DAYTONA BEACH, FLORIDA**

[illegible]

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GENERAL ELECTRIC
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1.0 SCOPE

THIS SPECIFICATION ESTABLISHES THE PERFORMANCE, DESIGN, TEST, AND QUALIFICATION REQUIREMENTS FOR PLASMA DISPLAYS USED IN MILITARY APPLICATIONS.

2.0 APPLICATION DOCUMENTS

THE FOLLOWING DOCUMENTS, OF THE ISSUE IN EFFECT ON THE DATE OF INVITATION FOR BIDS OR REQUEST FOR PROPOSAL, FORM A PART OF THIS SPECIFICATION TO THE EXTENT SPECIFIED HEREIN. IN THE EVENT OF CONFLICT BETWEEN DOCUMENTS REFERENCED HERE AND CONTENTS OF SECTIONS 3, 4, AND 5, THE CONTENTS OF SECTIONS 3, 4, AND 5 SHALL BE CONSIDERED A SUPERSEDING REQUIREMENT.

2.1 GOVERNMENT DOCUMENTS

MILITARY SPECIFICATIONS

MIL-M-7298	MANUALS, TECHNICAL: COMMERCIAL EQUIPMENT
MIL-P-116	PRESERVATION, METHODS OF
MIL-E-16400	ELECTRONIC, INTERIOR COMMUNICATION AND NAVAL SHIP AND SHORE, GENERAL SPECIFICATION FOR
MIL-S-901	SHOCK TESTS, SHIPBOARD MACHINERY, EQUIPMENT AND SYSTEMS, REQUIREMENTS FOR
MIL-C-5015	CONNECTORS, ELECTRICAL, CIRCULAR THREADED, AN TYPE, GENERAL SPECIFICATION FOR
MIL-P-24423	PROPULSION AND AUXILIARY CONTROL CONSOLE AND ASSOCIATED CONTROLS AND INDUSTRIAL EQUIPMENT, NAVAL SHIPBOARD USE, BASIC DESIGN REQUIREMENTS
MIL-C-26482	CONNECTORS, ELECTRICAL (CIRCULAR, MINIATURE, QUICK DISCONNECT, ENVIRONMENT RESISTING), RECEPTACLES AND PLUGS, GENERAL SPECIFICATIONS FOR
MIL-C-83723	CONNECTORS, ELECTRICAL (CIRCULAR, ENVIRONMENT RESISTING), RECEPTACLE (NARROW FLANGE MOUNT, BAYONET COUPLING, CRIMP SOCKET CONTACT), (SERIES 1, CLASS A, G, AND R)
MIL-C-85049	CONNECTOR ACCESSORIES, ELECTRICAL SPECIFICATION FOR

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MIL-C-38999

CONNECTORS, ELECTRICAL, CIRCULAR, MINIATURE, HIGH DENSITY, QUICK DISCONNECT, ENVIRONMENTAL RESISTANT, REMOVABLE CRIMP AND HERMETIC SOLDER CONTACTS, GENERAL SPECIFICATIONS FOR

MILITARY STANDARDS

MIL-STD-454

STANDARD GENERAL REQUIREMENTS FOR ELECTRONICS EQUIPMENT

MIL-STD-108

DEFINITIONS OF AND BASIC REQUIREMENTS FOR ENCLOSURES FOR ELECTRIC AND ELECTRONIC EQUIPMENT

MIL-STD-461

ELECTROMAGNETIC EMISSION AND SUSCEPTIBILITY REQUIREMENTS FOR THE CONTROL OF ELECTROMAGNETIC INTERFERENCE

MIL-STD-462

ELECTROMAGNETIC INTERFERENCE CHARACTERISTICS, MEASUREMENT OF

MIL-STD-1397(SH)

INPUT/OUTPUT INTERFACES, STANDARD DIGITAL DATA, NAVY SYSTEMS

MIL-STD-167-1

MECHANICAL VIBRATION OF SHIPBOARD EQUIPMENT

MIL-STD-785

RELIABILITY PROGRAM FOR SYSTEMS AND EQUIPMENT DEVELOPMENT AND PRODUCTION

MIL-STD-130

IDENTIFICATION MARKING OF U.S. MILITARY PROPERTY

MIL-STD-882

SYSTEM SAFETY PROGRAM REQUIREMENTS

DOD-STD-1399

INTERFACE STANDARD FOR SHIPBOARD SYSTEMS

MILITARY HANDBOOKS

MIL-HDBK-217

RELIABILITY PREDICTION FOR MILITARY EQUIPMENT

MIL-HDBK-472

MAINTAINABILITY PREDICTION

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2.2 NONGOVERNMENT DOCUMENTS

2.2.1 AMERICAN NATIONAL STANDARDS INSTITUTE

X3.4-1977

CODE FOR INFORMATION INTERCHANGE

X3.64-1979

ADDITIONAL CONTROLS FOR USE WITH
THE AMERICAN NATIONAL STANDARD
CODE FOR INFORMATION INTERCHANGE

3.0 REQUIREMENTS

THIS SECTION OF THE PURCHASE SPECIFICATION CONTAINS THE PERFORMANCE, DESIGN, AND CONSTRUCTION REQUIREMENTS FOR A SINGLE PLASMA DISPLAY UNIT AND PROVIDES A MEANS OF TESTING AND VERIFYING PERFORMANCE. THE PLASMA DISPLAY UNIT SHALL MEET ALL THE APPLICABLE REQUIREMENTS AS SPECIFIED IN MIL-E-16400 FOR SHIPBOARD EQUIPMENT. NOTE, HOWEVER, THE PLASMA DISPLAY UNITS WILL BE MOUNTED TO THE MACHINERY CONTROL SYSTEM WHICH IS SUBJECT TO THE REQUIREMENTS SPECIFIED IN MIL-P-24423. THEREFORE, THE PLASMA DISPLAY UNIT SHALL MEET THE REQUIREMENTS SPECIFIED IN MIL-P-24423 WHEN MOUNTED TO THE CONTROL CONSOLES.

3.1 STANDARD EQUIPMENT

THE PLASMA DISPLAY UNIT IS A SELF-CONTAINED ASSEMBLY WHICH PROVIDES THE NECESSARY DRIVE AND DISPLAY ELECTRONICS, AND ALPHANUMERIC CHARACTER GENERATION CAPABILITIES TO PRODUCE IMAGES FORMED BY ARRAYS OF ILLUMINATED DOTS.

THIS UNIT ALSO CONTAINS THE NECESSARY CIRCUITS TO INTERFACE WITH A KEYBOARD AND HOST COMPUTER AS DESCRIBED IN THIS SECTION.

3.2 FUNCTIONAL PERFORMANCE


3.2.1 DISPLAY SCREEN CHARACTERISTICS

3.2.1.1 DISPLAY AREA

THE PLASMA DISPLAY SHALL HAVE A MINIMUM ACTIVE DISPLAY AREA OF 7.9 X 7.9 INCHES.

3.2.1.2 ADDRESSABLE PIXELS

THE PLASMA SHALL BE ORGANIZED AS A 508 X 508 OR 512 X 512 MATRIX FOR A TOTAL OF 258,064 OR 262,144 ADDRESSABLE PIXELS.

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3.2.1.3 PIXEL SPACING

THE PLASMA DISPLAY SHALL HAVE A MINIMUM OF 60 PIXELS PER INCH. THIS IS EQUIVALENT TO MAXIMUM PIXEL SPACING (CENTER TO CENTER) OF 0.0167 INCHES.

3.2.1.4 PIXEL SIZE

THE SIZE OF EACH PIXEL SHALL BE APPROXIMATELY 0.010 INCHES.

3.2.1.5 PIXEL DEFECTS

THE PLASMA DISPLAY SHALL NOT HAVE MORE THAN 0.01% ALLOWABLE RANDOM ELEMENT FAILURES. THIS DOES NOT INCLUDE ELEMENTS COLLOCATED WITH INTERNAL SPACERS IN THE DISPLAY PANEL.

3.2.1.6 DUTY CYCLE

ALL DOTS SHALL BE CAPABLE OF REMAINING LIT INDEFINITELY. THE PANEL SHALL BE CAPABLE OF OPERATING INDEFINITELY WITH 25% OF THE PIXELS LIT.

3.2.2 VISUAL PARAMETERS

3.2.2.1 AREA BRIGHTNESS

THE AREA BRIGHTNESS SHALL MEASURE THE EMITTANCE OF A GROUP OF ACTIVATED DOTS INCLUDING THE UNEXCITED SPACE BETWEEN THE DOTS. AT LEAST 8 DIFFERENT AREAS MUST BE SAMPLED WHICH UNIFORMLY COVER THE ENTIRE DISPLAY SCREEN. THE AVERAGE AREA BRIGHTNESS OF THE PLASMA DISPLAY SHALL BE A MINIMUM OF 3.8 FOOTLAMBERTS (WITH ALL REQUIRED FILTERS INSTALLED). THE DIFFERENCE IN AREA BRIGHTNESS BETWEEN THE BRIGHTEST AND DIMMEST MEASUREMENT DIVIDED BY THE AVERAGE AREA BRIGHTNESS SHALL BE LESS THAN 0.45. THE PLASMA BRIGHTNESS SHALL BE ADJUSTABLE FROM FULL BRIGHTNESS TO APPROXIMATELY ONE FOOT LAMBERT IN A MINIMUM OF 6 STEPS. THE BRIGHTNESS CONTROL SHALL BE VIA TWO "FUNCTION" KEYS LOCATED ON THE KEYBOARD. (SEE FIGURE 6 AND 7) DEPRESSING THE "DSPL BRT ↑" SHALL CAUSE THE DISPLAY TO INCREASE IN INTENSITY BY ONE STEP. DEPRESSING THE "DSPL BRT ↓" SHALL CAUSE THE DISPLAY TO DECREASE IN INTENSITY BY ONE STEP. THE INTENSITY CONTROL CIRCUITRY AND PROGRAMMING SHALL BE COMPLETELY CONTAINED WITHIN THE PLASMA DISPLAY SYSTEM AND SHALL NOT REQUIRE ANY INTERVENTION BY THE HOST COMPUTER. THE KEYBOARD CHARACTERS GENERATED BY THE INTENSITY CONTROL KEYS SHALL NOT BE PASSED ON TO THE HOST COMPUTER AND SHALL NOT INTERFERE WITH THE PASSING OF OTHER KEYBOARD DATA TO THE HOST COMPUTER. THE HOST COMPUTER SHALL

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ALSO BE CAPABLE OF INTENSITY CONTROL BY SENDING THE APPROPRIATE INTENSITY CONTROL CHARACTERS. NO OTHER INTENSITY CONTROLS SHALL BE PROVIDED."

3.2.2.2 CONTRAST RATIO

THE PLASMA DISPLAY CONTRAST RATIO SHALL BE A MINIMUM OF 14:1 IN AMBIENT LIGHT CONDITIONS OF 5 TO 100 FOOTCANDLES.

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3.2.2.3 LIGHT SPECTRUM

WHEN ACTIVATED, EACH PIXEL SHALL EMIT LIGHT IN THE NEON ORANGE SPECTRUM WITH A PREDOMINANT WAVE LENGTH OF 585.2 NANOMETERS (NOMINAL).

3.2.2.4 VIEWING ANGLE

ALL PIXELS LEGIBLE VIEWED AT 1/2 PEAK BRIGHTNESS THROUGH AN ANGLE OF ± 21 DEGREES MINIMUM FROM NORMAL IN THE VERTICAL PLANE, AND ± 19 DEGREES MINIMUM FROM NORMAL IN THE HORIZONTAL PLANE.

3.2.2.5 FLICKER

NONE PERCEPTIBLE

3.2.2.6 LINEARITY

DEVIATION OF ANY VECTOR FROM A "THEORETICAL STRAIGHT LINE" SHALL BE LESS THAN 0.017 INCH ALONG THE LINE LENGTH.

3.2.2.7 DISPLAY SPEED

THE DISPLAY SHALL BE CAPABLE OF TRANSFERRING A COMPLETE PAGE OF ASCII CHARACTERS FROM A FILE BUFFER TO THE SCREEN IN A MAXIMUM OF ONE SECOND.

3.2.2.8 SCREEN ERASE

THE SCREEN SHALL BE CAPABLE OF BEING ERASED IN A MAXIMUM OF 150 MICROSECONDS.

3.2.3 ALPHANUMERIC DISPLAY

3.2.3.1 CHARACTER SIZE

THE PLASMA DISPLAY SHALL UTILIZE A SEVEN COLUMN BY NINE ROW CHARACTER MATRIX WITH ONE DOT BETWEEN CHARACTERS AND SEVEN DOTS BETWEEN LINES. THE DISPLAY SHALL BE CAPABLE OF DISPLAYING A TOTAL OF NINE-SIX UPPERCASE AND LOWERCASE STANDARD ASCII ALPHABETIC, NUMERIC, AND PUNCTUATION CHARACTERS. APPROXIMATE CHARACTER SIZE SHALL BE 0.110 INCH WIDE BY 0.143 INCH HIGH.

3.2.3.2 SPECIAL CHARACTERS

THE SCREEN SHALL BE CAPABLE OF DISPLAYING SIX USER DEFINED SPECIAL CHARACTERS AS SHOWN IN FIGURE 1. THESE CHARACTERS SHALL BE PART OF THE FIRMWARE (I.E.,

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	CHARACTER 1	CHARACTER 2	CHARACTER 3
ROW 1 (TOP)	0000000	0000000	0000000
ROW 2	0000000	0000000	0000000
ROW 3	0000000	0001000	0001000
ROW 4	0000000	0001000	0001000
ROW 5	0000000	0010000	0010100
ROW 6	0000000	0010000	0010100
ROW 7	0000000	0100000	0100010
ROW 8	0000000	0100000	0100010
ROW 9 (BOTTOM)	0111110	0111110	0111110

	CHARACTER 4	CHARACTER 5	CHARACTER 6
ROW 1 (TOP)	0000000	0000000	0000000
ROW 2	0000000	0000000	0000000
ROW 3	0001110	0001110	0011100
ROW 4	0001000	0001000	0010000
ROW 5	0010100	0010111	0101110
ROW 6	0010100	0010100	0101000
ROW 7	0100010	0100010	1000111
ROW 8	0100010	0100010	1000100
ROW 9 (BOTTOM)	0111110	0111110	1111100

NOTE: "1" REPRESENTS A LIT CELL
"0" REPRESENTS AN UNLIT CELL

FIGURE 1. SPECIAL CHARACTERS

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DRAWN				
ISSUED		SCALE	SHEET 10	

STORIED IN ROM OR PROM SO THAT THE BIT MAP OF THE CHARACTERS ARE NOT LOST WHEN POWER IS REMOVED FROM THE PLASMA DISPLAY UNIT). THESE CHARACTERS SHALL BE DISPLAYED ON THE SCREEN WHEN THE PROPER COMMAND SEQUENCE IS SENT TO THE TERMINAL BY THE HOST DEVICE.

3.2.3.3 CURSOR DISPLAY

THE CURSOR DISPLAY SHALL BE USER SELECTABLE TO BE INVISIBLE OR A BLINKING CURSOR LOCATED IN THE CURRENT CHARACTER DOT MATRIX.

3.2.3.4 DISPLAY CAPACITY

WITH A 7 X 9 CHARACTER FORMAT THERE SHALL BE 63 TO 64 CHARACTERS PER LINE AND 32 LINES FOR A TOTAL OF 2016 TO 2048 CHARACTERS.

3.2.4 DATA TRANSFER

DATA TRANSFER SHALL BE ACCOMPLISHED USING AT LEAST AN 8 BIT PARALLEL I/O PORT. PORT OPERATION AND SIGNAL LEVELS SHALL BE IN ACCORDANCE WITH MIL-STD-1397, CLASSIFICATION TYPE B (NTDS-FAST) COMPUTER TO PERIPHERAL OPERATION. THE NTDS-FAST INTERFACE SHALL BE COMPATIBLE WITH THE AN/UYK-44 (MRP) INPUT/OUTPUT CHANNEL ADAPTER (IOCA) SEM WHICH IS MADE BY SPERRY (F2 IS THE CONTRACT ORDERING DESIGNATION). THE TERMINAL SHALL BE CAPABLE OF ACCEPTING DATA RATES UP TO 150 KILOBYTES PER SECOND.

3.2.5 ASCII CODE SET

THE TERMINAL WILL USE THE AMERICAN NATIONAL STANDARD CODE FOR INFORMATION EXCHANGE (ASCII), 7 BIT AS CONTROLLED BY ANSI X3.4 AND ANSI X3.64 1979.

3.2.6 TERMINAL FUNCTIONS

3.2.6.1 SCROLLING

THE TERMINAL SHALL BE CAPABLE OF SCROLLING THE DISPLAY UP OR DOWN.

3.2.6.2 SPLIT SCREEN

THE TERMINAL SHALL BE CAPABLE OF SPLITTING THE SCREEN INTO TWO INDEPENDENT AREAS. THE TERMINAL SHALL BE CAPABLE OF SCROLLING UP OR DOWN WHILE IN THE SPLIT SCREEN MODE. THE SCROLLING SHALL ONLY OCCUR IN THE ACTIVE DISPLAY AREA DEFINED BY THE HOST DEVICE.

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3.2.6.3 USER PROGRAMMABLE CHARACTERS

THE TERMINAL SHALL BE CAPABLE OF STORING A MINIMUM OF SIXTEEN 8 X 16 USER PROGRAMMABLE SYMBOLS WHICH ARE DOWNLOADED FROM THE HOST DEVICE. THESE SYMBOLS ARE DISPLAYED ON THE SCREEN WHEN THE PROPER COMMAND SEQUENCE IS SENT TO THE TERMINAL BY THE HOST DEVICE.

3.2.6.4 PIXEL BIT MAP ACCESSIBILITY

THE TERMINAL SHALL BE CAPABLE OF ALLOWING THE HOST DEVICE TO CONTROL INDIVIDUAL PIXELS.

3.2.6.5 ROW, COLUMN ADDRESSING

THE TERMINAL SHALL BE CAPABLE OF POSITIONING THE CURSOR WITH THE CHARACTER ROW AND COLUMN IN THE ALPHA MODE.

3.2.6.6 BLINKING

THE TERMINAL SHALL BE CAPABLE OF BLINKING DEFINED SECTIONS OF THE DISPLAY. A MAXIMUM OF 256 CHARACTERS SHALL BE CAPABLE OF BEING BLINKED IN A MAXIMUM OF 16 DIFFERENT BLINKING FIELDS.

3.2.6.7 REVERSE VIDEO

THE TERMINAL SHALL BE CAPABLE OF REVERSE VIDEO WHERE EACH DOT IN THE CHARACTER MATRIX WHICH IS NORMALLY LIT, IS EXTINGUISHED, AND EACH DOT NORMALLY EXTINGUISHED IS LIT, CREATING A DARK CHARACTER ON A BRIGHT BACKGROUND.

3.2.6.8 UNDERLINING

THE TERMINAL SHALL BE CAPABLE OF PLACING AN UNDERLINE SYMBOL ON THE BOTTOM END OF THE FONT FIELD OF ANY DISPLAYABLE CHARACTER.

3.2.6.9 ADDRESSABLE MODE

THE TERMINAL SHALL BE CAPABLE OF POSITIONING THE CURSOR BY ABSOLUTE, RELATIVE, AND INCREMENTAL ADDRESSING.

3.2.6.10 EXTENDED MEMORY

THE DISPLAY UNIT SHALL CONTAIN A MINIMUM OF 64K BYTES OF RANDOM ACCESS MEMORY (RAM) WHICH WILL BE USED BY THE HOST DEVICE TO STORE DATA FILES WHICH IS

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PRESENTLY NOT BEING SHOWN ON THE SCREEN. THE DISPLAY UNIT SHALL BE CAPABLE OF CHANGING THE SCREEN TO THE DATA STORED IN THIS MEMORY BY A SEQUENCE OF COMMAND WORDS FROM THE HOST DEVICE WITHIN ONE SECOND.

3.2.6.11 BELL ALARM

THE PLASMA DISPLAY UNIT SHALL CONTAIN A BELL ALARM WHICH IS LOCATED IN THE KEYBOARD OR DISPLAY TERMINAL. THE HOST DEVICE SHALL BE CAPABLE OF TURNING THE BELL ON OR OFF BY SENDING A SEQUENCE OF COMMAND WORDS TO THE PLASMA DISPLAY UNIT. THE VOLUME OF THE BELL ALARM SHALL BE ADJUSTABLE FROM THE KEYBOARD OR DISPLAY HEAD.

3.2.7 PHYSICAL CHARACTERISTICS/DISPLAY TERMINAL

DIMENSIONS:	SEE FIGURE 2 FOR P1 AND FIGURE 2A FOR P4
WEIGHT:	21 POUNDS MAXIMUM
CONSTRUCTION:	ALUMINUM INTERNAL AND EXTERNAL STRUCTURE
PCB TYPE:	ACCORDANCE WITH MIL-P-28809C
KEYBOARD CONNECTOR:	(SEE TABLE 1)
I/O CONNECTOR:	(SEE TABLES 2A AND 2B)

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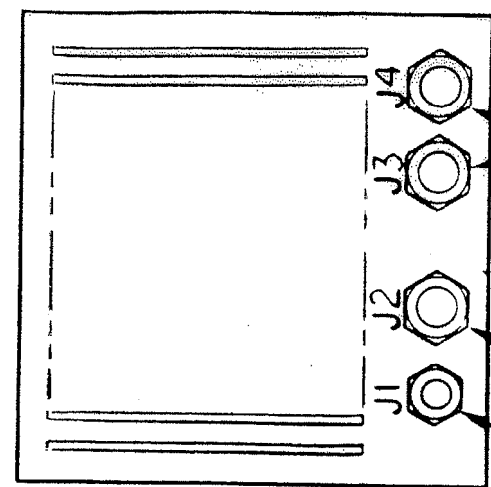
DIST. TO

THIS AREA NS TO BE FREE OF PAINT

THIS SURFACE TO BE BLACK

MOUNTING 8 PL

HEAT SINK FINS



J1 J2 J3 J4
DATA I/O FROM CONTROLLER/KEYBD.
POWER CONN.

NTDS FAST I/O

FIGURE 2. DISPLAY UNIT
ALL DIMENSIONS ARE IN INCHES

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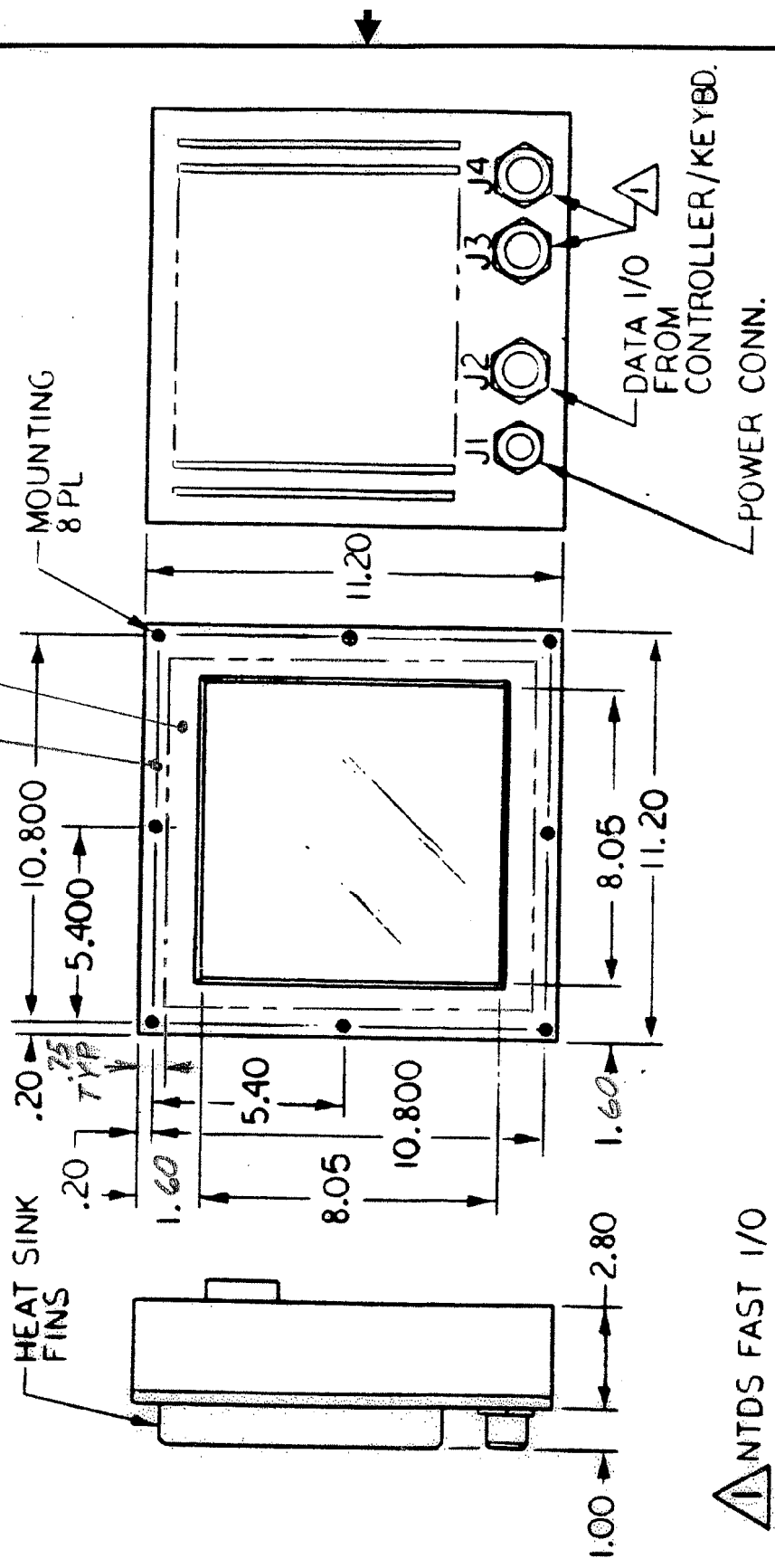
ISSUED

SCALE

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DIST. TO

THIS AREA NS TO BE FREE OF PAINT
 THIS SURFACE TO BE BLACK



NTDS FAST I/O

FIGURE 2A DISPLAY UNIT
 ALL DIMENSIONS ARE IN INCHES

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SH 15
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TABLE 1. TERMINAL KEYBOARD CONNECTOR (J2) PIN ASSIGNMENT

CONNECTOR PART NUMBER: D38999/44FD35PA MATING CONNECTOR: D38999/46FD35SA		
PIN	NAME	(KEYBOARD) FUNCTION
1	TXDA+	TRANSMIT DATA ON A
2	TXDA-	TRANSMIT DATA ON A
3	RXDA+	RECEIVE DATA ON A
4	RXDA-	RECEIVE DATA ON A
5	CTSA-	CLEAR & SEND ON A
6	CTSA+	CLEAR & SEND ON A
9	DSRA-	DISPLAY RECEIVE
10	DSRA+	DISPLAY RECEIVE
11	DTRA-	DISPLAY TRANSMIT
12	DTRA+	DISPLAY TRANSMIT
13	GND	LOGIC GROUND
14	GND	LOGIC GROUND
16	+5V	POWER
17	+5V	POWER
18	TXDB+	TRANSMIT DATA
19	TXDB-	TRANSMIT DATA
20	RXDB+	RECEIVE DATA ON B
21	RXDB-	RECEIVE DATA ON B
22	CTSB-	CLEAR TO SEND ON B
23	CTSB+	CLEAR TO SEND ON B
24	RSDB-	REQUEST TO SEND
25	RTSB+	REQUEST TO SEND
26	GND	LOGIC GROUND
34	RTSA-	REQUEST TO SEND ON A
35	RTSA+	REQUEST TO SEND ON A
36	SPARE	
37	SPARE	

NOTE:

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TABLE 2A. TERMINAL I/O CONNECTOR PIN ASSIGNMENT (J3)

CONNECTOR PART NUMBER: D38999/44FE35SA MATING CONNECTOR: D38999/46FE35PA			
PIN	FUNCTION	PIN	FUNCTION
1	OD0	28	OD12
2	OD0 RTN	29	OD12 RTN
3	SPARE	30	OD13
4	OD1	31	OD13 RTN
5	OD1 RTN	32	OD14
6	OD2	33	OD14 RTN
7	OD2 RTN	34	OD15
8	OD3	35	OD15 RTN
9	OD3 RTN	36	SPARE
10	OD4	37	SPARE
11	OD4 RTN	38	SPARE
12	OD5	39	SPARE
13	OD5 RTN	40	SPARE
14	OD6	41	EFR RTN
15	OD6 RTN	42	EFA
16	GND	43	EFA RTN
17	OD7	44	SPARE
18	OD7 RTN	45	SPARE
19	OD8	46	GND
20	OD8 RTN	47	IDR
21	OD9	48	IDR RTN
22	OD9 RTN	49	IDA
23	OD10	50	ODA RTN
24	OD10 RTN	51	SPARE
25	SPARE	52	SPARE
26	OD11	53	SPARE
27	OD11 RTN	54	SPARE
		55	SPARE

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TABLE 2B. TERMINAL I/O CONNECTOR PIN ASSIGNMENT (J4)

CONNECTOR PART NUMBER: D38999/44FE35SB MATING CONNECTOR: D38999/46FE35PB			
PIN	FUNCTION	PIN	FUNCTION
1	ID0	28	ID12
2	ID0 RTN	29	ID12 RTN
3	SPARE	30	ID13
4	ID1	31	ID13 RTN
5	ID1 RTN	32	ID14
6	ID2	33	ID14 RTN
7	ID2 RTN	34	ID15
8	ID3	35	ID15 RTN
9	ID3 RTN	36	SPARE
10	ID4	37	SPARE
11	ID4 RTN	38	SPARE
12	ID5	39	SPARE
13	ID5 RTN	40	EIR
14	ID6	41	EIR RTN
15	ID6 RTN	42	EIE
16	GND	43	EIE RTN
17	ID7	44	SPARE
18	ID7 RTN	45	SPARE
19	ID8	46	GND
20	ID8 RTN	47	IDR
21	ID9	48	IDR RTN
22	ID9 RTN	49	IDA
23	ID10	50	IDA RTN
24	ID10 RTN	51	SPARE
25	SPARE	52	SPARE
26	ID11	53	SPARE
27	ID11 RTN	54	SPARE
		55	8/15 BITS

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3.2.8 POWER SUPPLY

OPERATING VOLTAGES WILL BE SUPPLIED BY A POWER SUPPLY UNIT (PSU). THE PSU WILL INTERFACE WITH THE DISPLAY UNIT PER FIGURE 3 AND TABLES 3A AND 3B. THE PSU MATING CONNECTORS SHALL BE SUPPLIED BY BUYER.

3.2.8.1 VOLTAGES

THE OUTPUT FROM THE PSU SHALL BE PER TABLE 4. THE POWER SUPPLY SHALL HAVE AN ADJUSTABLE RANGE FROM THE SPECIFIED VOLTAGE TO COMPENSATE FOR DISPLAY AGING.

THE INPUT POWER FOR THE PSU WILL BE SUPPLIED BY GENERAL ELECTRIC. THIS INPUT VOLTAGE WILL BE 28VDC \pm 3VDC. THE INPUT CURRENT WILL BE 5 AMPERES MAXIMUM.

3.2.8.2 PHYSICAL CHARACTERISTICS/POWER SUPPLY UNIT

DIMENSIONS:	SEE FIGURE 4
WEIGHT:	11 POUNDS MAXIMUM
CONSTRUCTION:	ALUMINUM INTERNAL AND EXTERNAL STRUCTURE
POWER INPUT CONNECTOR (J1):	SEE TABLE 3A"
POWER OUTPUT CONNECTOR (J2):	SEE TABLE 3B"

GENERAL ELECTRIC
SCS DEPT LCTN DAB

SIZE
A

FSCM NO
16331

DWG NO
63A141835

DRAWN

ISSUED

SCALE

SHEET 18

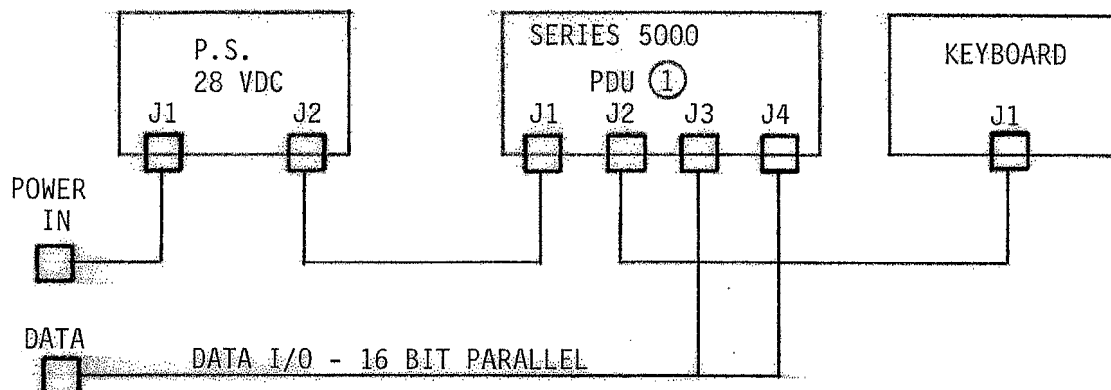


FIGURE 3. INTERCONNECT DIAGRAM

GENERAL ELECTRIC
SCS DEPT LOC DAB

SIZE
A

FSCM. NO.

16331

DWG. NO.

63A141835

DRAWN

ISSUED

SCALE

SHEET 19

DIST. TO

SIZE A
 DWG NO 63A141835
 SH 20
 REV C

TABLE 3A. POWER INPUT CONNECTOR (J1) PIN ASSIGNMENT

CONNECTOR PART NUMBER: D38999/44FD5PN MATING CONNECTOR: D38999/46FD5SN	
J1 PIN	NAME
A	SPARE
B	SPARE
C	CHASSIS GND
D	28VDC RTN
E	28VDC

TABLE 3B. PSU TO PDH CONNECTOR (J2) PIN ASSIGNMENT

CONNECTOR PART NUMBER: D38999/44FD18SN MATING CONNECTOR: D38999/46FD18PN		
<u>J2</u>		
J2-A	+VSS	+118 TO 128 VOLTS
J2-B	+VSS RTN	
J2-C	+70V	+70 +/- 0.7
J2-D	+70V RTN	
J2-E	+13V	+13 +/- 0.65
J2-F	+13V RTN	
J2-G	SPARE	
J2-H	SPARE	
J2-J	+5V	+5V +/- 0.20
J2-K	+5V RTN	
J2-L	+5V	
J2-M	+5V RTN	
J2-N	-5V	-5V +/- 0.25
J2-P	-5V RTN	
J2-R	+5V SENSE	
J2-S	+5V RTN SENSE	
J2-T	+VSS ADJ	
J2-U	-SFA	

GENERAL ELECTRIC
 SCSD DEPT LOC Daytona Beach

SIZE FSCM. NO.

DWG. NO.

A

16331

63A141835

DRAWN

ISSUED

SCALE

SHEET

20

DIST. TO

SIZE A
 DWG. NO 63A141835
 SH 21
 REV D

TABLE 4. PSU OUTPUT VOLTAGE/CURRENT

VDC	MAXIMUM CURRENT	USE
+5	10 AMPS	LOGIC
+13	0.25 AMPS	LOGIC/SUSTAINER
-5	0.5 AMPS	LOGIC
+70	0.25 AMPS	SUSTAINER
+120	0.20 AMPS	SUSTAINER

GENERAL ELECTRIC
 SCSD DEPT LOC Daytona Beach

SIZE A
 FSCM. NO. 16331

DWG. NO. 63A141835

DRAWN

ISSUED

SCALE

SHEET

21

DIST. TO

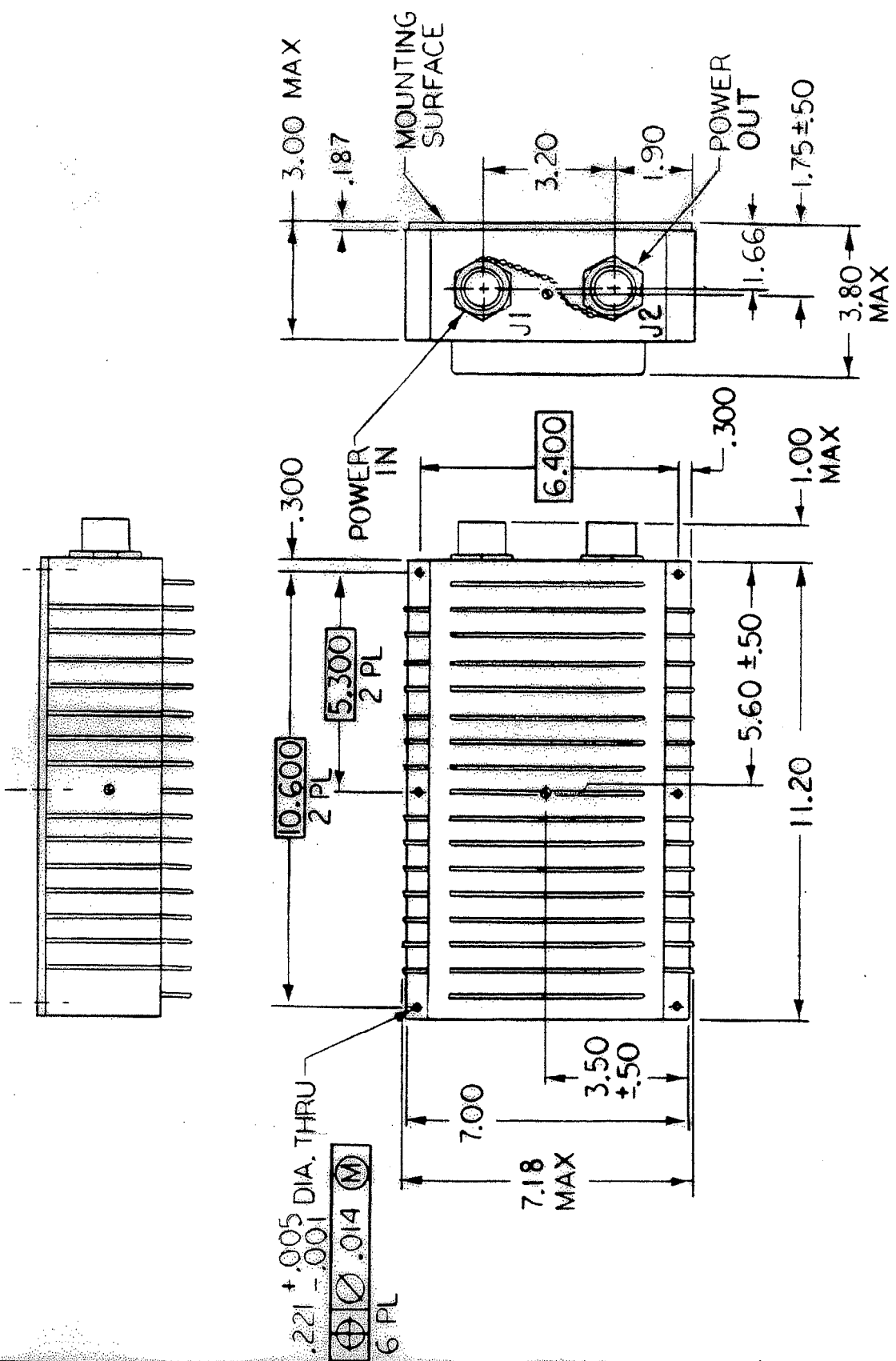


FIGURE 4. POWER SUPPLY UNIT
 ALL DIMENSIONS ARE IN INCHES

GENERAL ELECTRIC SCS DEPT LOC DAB		SIZE A FSCM. NO. 16331	DWG. NO. 63A141835
DRAWN ISSUED		SCALE	SHEET 22

3.2.9 KEYBOARD

THE KEYBOARD SHALL BE DETACHED FROM THE PLASMA DISPLAY TERMINAL AND CONFIGURED AS A STANDARD ALPHANUMERIC KEYBOARD WITH A MINIMUM OF SIX SPECIAL FUNCTION KEYS AND THE TWO DISPLAY DIMMING KEYS. THE KEYSWITCHES SHALL INCLUDE THE STANDARD TYPEWRITER KEYS, QWERTY, MODE AND EFFECTOR KEYS, PLUS CONTROL KEYS. EACH KEYSWITCH SHALL BE CAPABLE OF GENERATING STANDARD UNSHIFTED AND SHIFTED CHARACTERS, PLUS CONTROL CHARACTERS. THE KEYBOARD SHALL BE SUPPLIED WITH THREADED INSERTS IN THE BOTTOM SURFACE FOR SECURING THE KEYBOARD TO THE CONSOLE SHELF.

3.2.9.1 SPECIAL CHARACTERS

THE KEYBOARD SHALL BE CAPABLE OF ACTIVATING THE SIX SPECIAL CHARACTERS SHOWN IN FIGURE 1, AND THE KEYS SHALL BE MARKED AS SHOWN IN FIGURE 5.

3.2.9.2 KEYBOARD KEY LAYOUT AND MARKING

THE KEYBOARD KEY LAYOUT AND MARKING SHALL BE AS SHOWN IN FIGURE 6.

3.2.9.3 KEYBOARD INTERFACE

THE KEYBOARD INTERFACE SHALL CONSIST OF A PIGTAILED, JACKETED CABLE EXITING FROM THE LEFT SIDE NEAR THE REAR OF THE KEYBOARD CHASSIS APPROXIMATELY ONE INCH ABOVE THE BOTTOM OF THE KEYBOARD. THE PIGTAIL SHALL BE FURNISHED WITH A PLUG AND BACKSHELL HARDWARE PER TABLE 5 AND SHALL BE 36 +/- 3 INCHES LONG. THE PIN ASSIGNMENTS SHALL BE PER TABLE 5.

3.2.9.4 KEYBOARD SLOPE

THE KEYBOARD SHALL BE SLOPED WITH A MINIMUM OF 15 DEGREES AND A MAXIMUM OF 25 DEGREES FROM THE HORIZONTAL. THE PREFERRED SLOPE IS 17 TO 18 DEGREES.

3.2.9.5 KEY SIZE

THE ALPHANUMERIC KEY TACTILE SURFACES SHALL BE CONCAVED (ROUND OR SQUARE). THE DIMENSION ACROSS THE TACTILE SURFACE SHALL BE 0.385 INCH MINIMUM TO 0.75 INCH MAXIMUM (0.5 INCH IS PREFERRED).

3.2.9.6 KEY SPACING

THE KEY SPACING FOR THE ALPHANUMERIC KEYS SHALL BE 0.75 INCH CENTER TO CENTER. THE MINIMUM SEPARATION BETWEEN KEYS SHALL BE 0.25 INCH, MEASURED AT THE TOP SURFACE OF THE KEYS.

GENERAL ELECTRIC SCSD DEPT LOC Daytona Beach		SIZE A	FSCM. NO. 16331	DWG. NO. 63A141835
DRAWN		SCALE		SHEET 23
ISSUED				

3.2.9.7 KEY ACTIVATING RESISTANCE

THE KEY ACTIVATING RESISTANCE SHALL BE A MINIMUM OF 0.9 OUNCE AND A MAXIMUM OF 5.3 OUNCES.

3.2.9.8 KEY DISPLACEMENT

THE KEY DISPLACEMENT FOR CONTACT CLOSURE SHALL BE A MINIMUM OF 0.13 INCH AND A MAXIMUM OF 0.19 INCH.

3.2.9.9 DRIPPROOF CONSTRUCTION

THE KEYBOARD SHALL PERFORM AS SPECIFIED HEREIN WHEN OPERATING WHILE BEING SUBJECT TO THE DRIPPROOF TEST (45 DEGREES) AS SPECIFIED IN MIL-STD-108, PARAGRAPH 4.3.

3.2.9.10 PHYSICAL CHARACTERISTICS/KEYBOARD

DIMENSIONS: SEE FIGURE 7
 WEIGHT: 10 POUNDS MAXIMUM
 CONSTRUCTION: ALUMINUM
 KEYBOARD CONNECTOR: (SEE TABLE 5)

GENERAL ELECTRIC
 SCSD DEPT LOC Daytona Beach

SIZE	FSCM. NO.	DWG. NO.
A	16331	63A141835
ISSUED	SCALE	SHEET 24

— (1)

∠ (2)


△ (3)

△ (4)

△ (5)

△ (6)

FIGURE 5. KEYBOARD MARKING FOR SPECIAL CHARACTERS

GENERAL  ELECTRIC SCS DEPT LOC DAB		SIZE A	FSCM. NO. 16331	DWG. NO. 63A141835
DRAWN		SCALE		DIST. TO
ISSUED		SHEET 25		

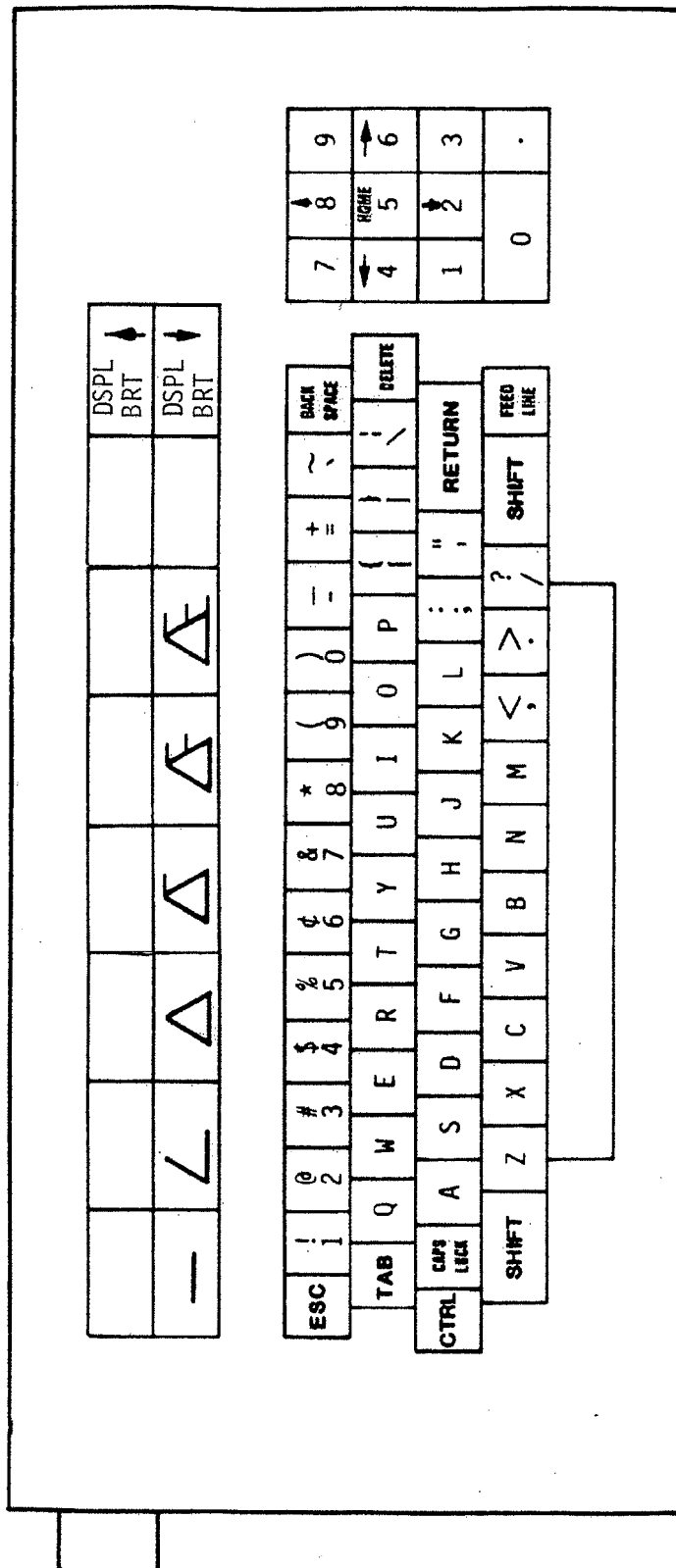


FIGURE 6. KEYBOARD KEY LAYOUT AND MARKING

GENERAL ELECTRIC
SCS DEPT LOC DAB

SIZE A FSCM. NO. 16331

DWG. NO. 63A141835

DRAWN

ISSUED

SCALE

SHEET 26

DIST. TO

TABLE 5. KEYBOARD CONNECTOR PIN ASSIGNMENTS

PIGTAIL PLUG: D38999/46WD35SA WITH M85049/69-15A ADAPTER AND M85049/68-1A11C HEAT SHRINK BOOT MATING RECEPTACLE: D38999/42WD35PA OR D38999/44FD35PA		
PIN	SIGNAL	DESCRIPTION
13	GND	LOGIC RTN
14	GND	CHASSIS GND
16	+5 VDC	POWER
17	+5 VDC	POWER
20	TXDA+	TRANSMIT DATA (KEYBOARD TO DISPLAY) RS422
21	TXDA-	TRANSMIT DATA (KEYBOARD TO DISPLAY) RS422
22	CTS-	RECEIVE DATA (DISPLAY TO KEYBOARD) RS422
		AUDIO ALARM
23	CTS+	RECEIVE DATA (DISPLAY TO KEYBOARD) RS422
		AUDIO ALARM
24	RTS-	ECHO CTS-
25	RTS+	ECHO CTS+
26	GND	LOGIC RTN

NOTE: THE UNUSED PINS IN THIS CONNECTOR ARE NOT SPARES. THIS CONNECTOR MATES WITH J2 ON THE PLASMA HEAD IN SOME APPLICATIONS.

GENERAL ELECTRIC

SCSD DEPT LOC Daytona Beach

SIZE

A

FSCM. NO.

16331

DWG. NO.

63A141835

DRAWN

ISSUED

SCALE

SHEET 27

DIST. TO

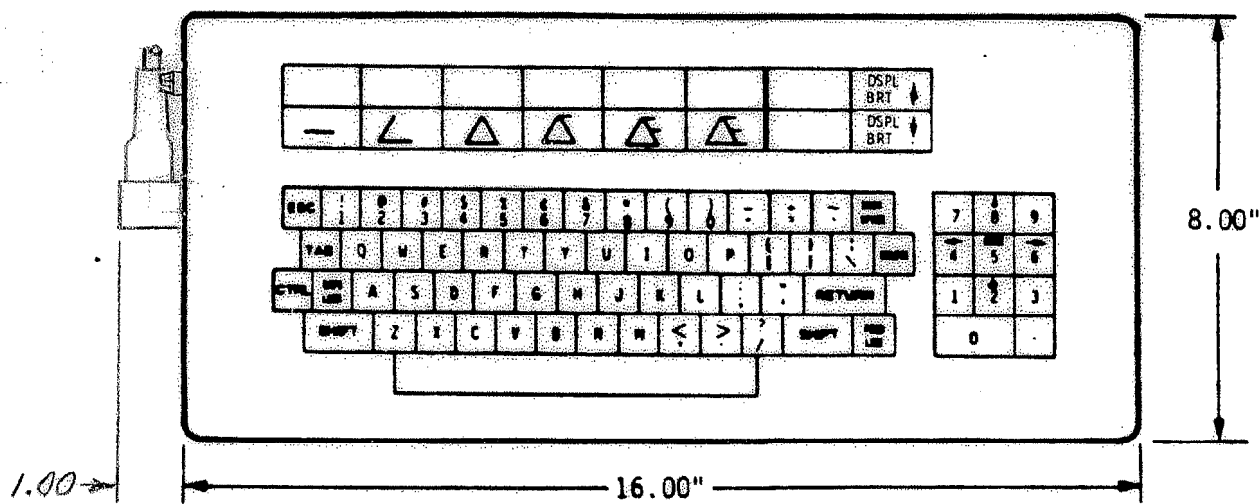
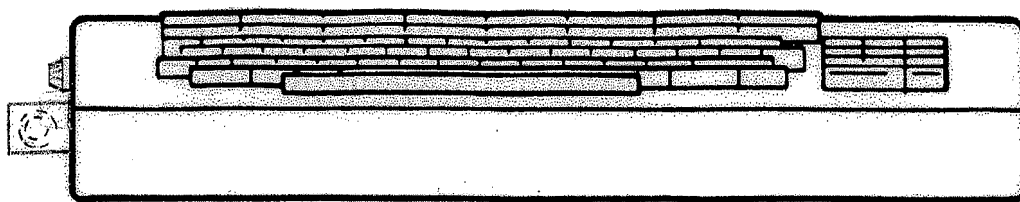
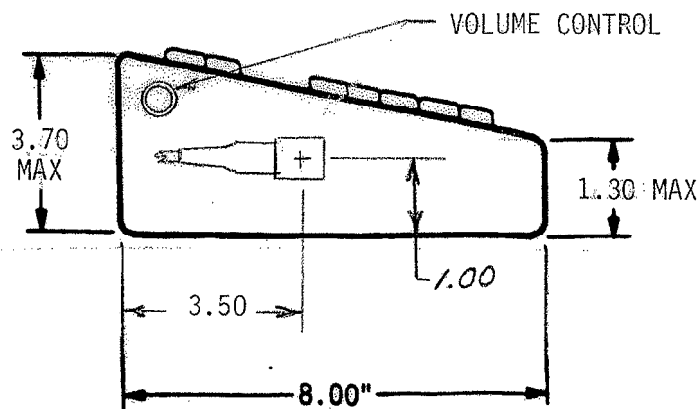


FIGURE 7. KEYBOARD

GENERAL ELECTRIC
SCS DEPT LOC DAB

SIZE
A

FSCM. NO.
16331 v

DWG. NO.
63A141835

DRAWN

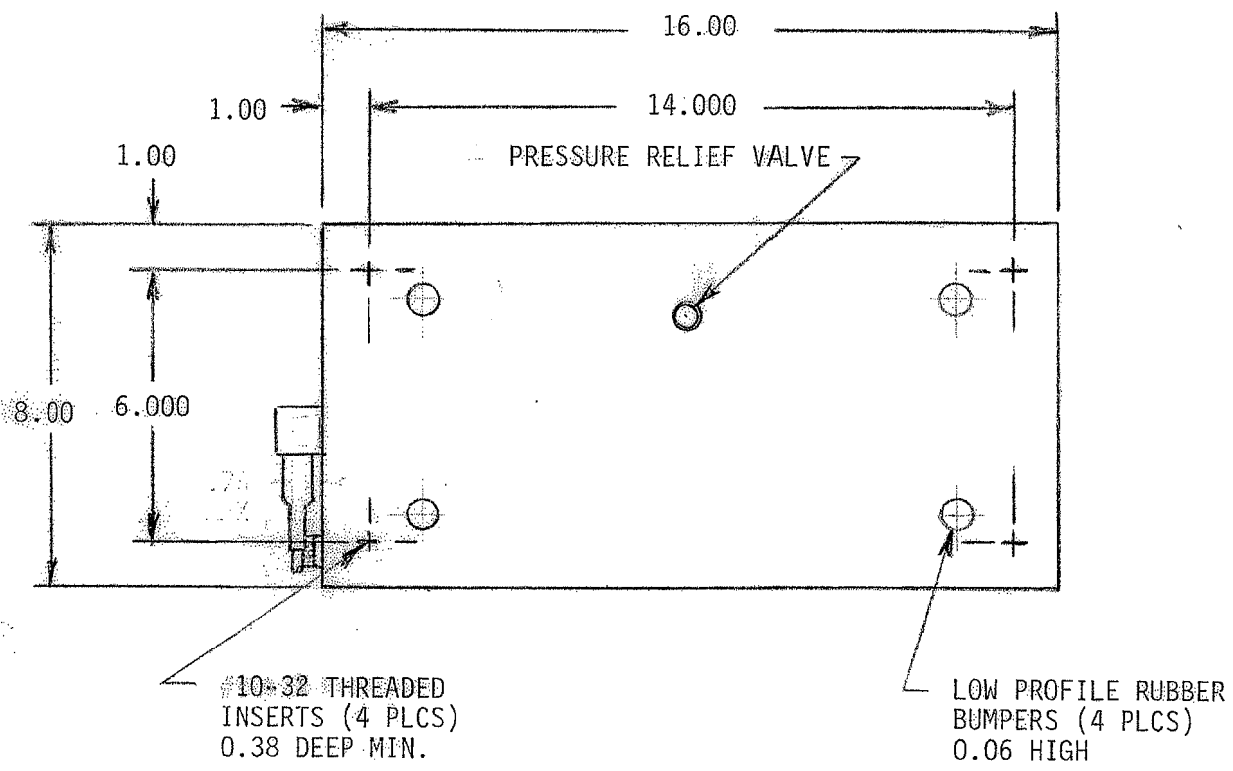
ISSUED

SCALE

SHEET 28

DIST. TO

REV. 28A
 SH
 DWG. NO. 63A141835
 SIZE A



BOTTOM VIEW

GENERAL ELECTRIC
 SCS DEPT LOC DAB

SIZE	FSCM. NO.	DWG. NO.
A	16331	63A141835
SCALE NC		SHEET 28A


DRAWN
 ISSUED

DIST. TO

REV M
SH 29
63A141835
DWG NO
SIZE A

3.2.10 CONNECTORS

ALL CONNECTORS EXCEPT MATING PLUGS SHALL BE PROVIDED BY THE SUPPLIER.
BUYER SHALL PROVIDE THE MATING PLUGS AND INTERFACING CABLES. ALL CONNEC-
TORS SHALL BE SELECTED PER MIL-STD-454, REQUIREMENT 10.

	GENERAL ELECTRIC COMPANY		SIZE	CAGE CODE	DWG NO
	SCS	DAB	A	16331	63A141835
DRAWN			SCALE		SHEET 29
ISSUED					

3.3 OPERABILITY

3.3.1 RELIABILITY

THE RELIABILITY OF THE PLASMA DISPLAY ASSEMBLY, AS DEFINED IN MIL-STD-785B, SHALL BE 10,000 HOURS MEAN-TIME BETWEEN FAILURE (MTBF) WHEN OPERATED AT 25 °C IN A NAVY SHELTERED ENVIRONMENT. THE MTBF REQUIREMENT SHALL BE DEMONSTRATED BY ANALYSIS USING FAILURE RATE DATA OF MIL-HDBK-217D FOR ELECTRONIC PARTS. FOR MECHANICAL PARTS, FAILURE RATE DATA MAY BE OBTAINED FROM NPRO-2 "NONELECTRONIC PARTS RELIABILITY DATA" OR OTHER VALID SOURCES. THE EFFECTIVENESS OF THE RELIABILITY PROGRAM SHALL BE MONITORED AND EVALUATED. A FAILED ITEM ANALYSIS REPORT PER MIL-STD-785B TASK 104 WILL BE REQUIRED FROM THE VENDOR TO SUPPORT THIS EFFORT.

3.3.2 USEFUL LIFE

THE USEFUL LIFE OF THE PLASMA DISPLAY UNIT SHALL BE AT LEAST 10 YEARS WITHOUT MAJOR OVERHAUL, NOT INCLUDING REASONABLE SERVICING AND PARTS REPLACEMENT. THE RATED SHELF LIFE OF A PLASMA DISPLAY UNIT SHALL BE IN EXCESS OF 10 YEARS.

3.3.3 MAINTAINABILITY

THE PLASMA DISPLAY UNIT SHALL BE PACKAGED MODULARLY SUCH THAT MODULES/BOARDS ARE EASILY REMOVABLE. NO SPECIAL TOOLS SHALL BE REQUIRED FOR INSERTION OR REMOVAL OF THESE MODULES. THE MEAN ACTIVE MAINTENANCE TIME, AS DEFINED IN MIL-HDBK-472, SHALL BE 30 MINUTES OR LESS. THIS REQUIREMENT SHALL BE DEMONSTRATED BY ANALYSIS. THE ANALYSIS AND RESULTS SHALL BE DESCRIBED IN A FINAL REPORT.

3.3.4 BUILT-IN-TEST

THE PLASMA DISPLAY UNIT SHALL HAVE BUILT-IN-TEST (BIT) FEATURES TO PROVIDE FAULT DETECTION FUNCTIONS WHICH ARE SUFFICIENT TO ALLOW ISOLATION TO THE BOARD LEVEL. THE BIT SHALL HAVE FEATURES TO DETECT KEYBOARD FAULTS. BIT FUNCTIONS SHALL BE EXECUTED UPON POWER-UP OR BY HOST COMMAND. THE BIT STATUS SHALL BE READABLE BY THE HOST. THE HOST DEVICE SHALL RECEIVE INDICATION WHEN THE DISPLAY UNIT HAS COMPLETED BIT TEST AND IS READY TO ACCEPT COMMAND INPUTS FROM THE HOST DEVICE.

3.3.5 ENVIRONMENTAL

THE PLASMA DISPLAY UNIT SHALL NOT BE ADVERSELY AFFECTED BY THE APPLICABLE ENVIRONMENTAL CONDITIONS AS SPECIFIED IN MIL-E-16400 FOR SHIPBOARD EQUIPMENT.

GENERAL ELECTRIC SCSD DEPT LOC Daytona Beach		SIZE A	FSCM. NO. 16331	DWG. NO. 63A141835
DRAWN				
ISSUED		SCALE	SHEET	30

3.3.5.1 AMBIENT TEMPERATURE

THE PLASMA DISPLAY UNIT SHALL BE DESIGNED AND CONSTRUCTED TO OPERATE CONTINUOUSLY OVER THE AMBIENT AIR TEMPERATURE OF 0 °C TO 65 °C AT GROUND LEVEL IN ACCORDANCE WITH MIL-E-16400, PARAGRAPH 4.8.3.1 THROUGH 4.8.3.3.

THE PLASMA DISPLAY UNIT SHALL BE DESIGNED AND CONSTRUCTED TO BE STORED FOR EXTENDED PERIODS AT AMBIENT AIR TEMPERATURE BETWEEN -55 °C AND 65 °C IN ACCORDANCE WITH MIL-E-16400, PARAGRAPH 4.8.3.1 THROUGH 4.8.3.3.

3.3.5.2 RELATIVE HUMIDITY

THE PLASMA DISPLAY UNIT SHALL BE DESIGNED AND CONSTRUCTED TO OPERATE CONTINUOUSLY IN AN ATMOSPHERE HAVING RELATIVE HUMIDITY UP TO 100 PERCENT INCLUDING CONDENSATION IN AND ON THE EQUIPMENT, IN ACCORDANCE WITH MIL-E-16400, PARAGRAPH 4.8.3.4.

3.3.5.3 VIBRATION

THE PLASMA DISPLAY UNIT SHALL BE DESIGNED AND CONSTRUCTED TO OPERATE IN THE PRESENCE OF TYPE I VIBRATION AS SPECIFIED IN MIL-STD-167-1 WITH A MAXIMUM EXCITATION FREQUENCY OF 33 HZ.

3.3.5.4 SHOCK

THE PLASMA DISPLAY UNIT SHALL BE DESIGNED AND CONSTRUCTED TO OPERATE IN THE PRESENCE OF GRADE A, CLASS I, HIGH IMPACT SHOCK IN ACCORDANCE WITH MIL-S-901C.

3.3.5.5 SALT FOG

THE PLASMA DISPLAY UNIT SHALL BE DESIGNED AND CONSTRUCTED TO OPERATE IN AN ATMOSPHERE CONTAINING 5 +1 PERCENT SALT SOLUTION AT A RELATIVE HUMIDITY OF 85 PERCENT, IN ACCORDANCE TO MIL-E-16400, PARAGRAPH 4.8.3.5.2.

3.3.5.6 FUNGUS

THE PLASMA DISPLAY UNIT SHALL NOT CONTAIN FUNGUS NUTRIENT SO THAT FUNGUS GROWTH IS NOT POSSIBLE IN ANY ENVIRONMENTAL CONDITIONS.

GENERAL ELECTRIC

SCSD DEPT LOC Daytona Beach

SIZE

A

FSCM. NO.

16331

DWG. NO.

63A141835

DRAWN

ISSUED

SCALE

SHEET

31

DIST. TO

3.3.5.7 MERCURY

THE PLASMA DISPLAY UNIT SHALL NOT CONTAIN MERCURY OR MERCURY COMPOUNDS, AND SHALL NOT COME IN DIRECT CONTACT WITH MERCURY, MERCURY COMPOUNDS, OR MERCURY CONTAINING DEVICES DURING MANUFACTURING, INSPECTION, OR TEST.

3.3.5.8 ELECTROMAGNETIC EMISSIONS AND SUSCEPTIBILITY

THE PLASMA DISPLAY UNIT SHALL MEET THE REQUIREMENTS OF MIL-STD-461B, CLASS A4 EQUIPMENT, IN ACCORDANCE WITH THE APPLICABLE PROCEDURES IN MIL-STD-462 WITH THE FOLLOWING EXCEPTIONS. THE RS03 LEVEL SPECIFIED IN MIL-STD-461B, PART 5, PARAGRAPH 18.2, SHALL BE 25 VOLTS/METER FROM 14 KHZ TO 10 GHZ AND THE RE01 LIMITS FOR THE POWER SUPPLY SHALL BE RELAXED TO 30 DB OVER THE SPECIFICATION LIMITS AT THE SWITCHING FREQUENCY AND SWITCHING FREQUENCY HARMONICS.

3.4 DESIGN AND CONSTRUCTION

3.4.1 MATERIALS, PROCESS AND PARTS

ALL PARTS SHALL BE IN ACCORDANCE TO MIL-E-16400, PARAGRAPH 3.4. SINTERED SLUG, WET ELECTROLYTIC TANTALUM CAPACITORS SHALL NOT BE USED.

3.4.1.1 OFF-THE-SHELF EQUIPMENT

COMPONENT PARTS OF UNMODIFIED OFF-THE-SHELF EQUIPMENT, DEFINED AS EXISTING DESIGNED EQUIPMENT READILY AVAILABLE FOR SALE TO THE GENERAL PUBLIC, ARE EXEMPT FROM PARTS CONTROL. HOWEVER, PARTS USED TO ADAPT THE EXISTING DESIGN TO MEET THE REQUIREMENTS OF THIS SPECIFICATION ARE SUBJECT TO PARTS CONTROL AND SHALL BE SUBMITTED TO THE BUYER FOR APPROVAL WITH JUSTIFICATION FOR THEIR USE. THIS EXEMPTION OF PARTS SHALL NOT RELIEVE THE SUPPLIER FROM COMPLIANCE WITH ANY OTHER REQUIREMENT OF THIS SPECIFICATION.

GENERAL ELECTRIC SCS DEPT LOTN DAB		SIZE A	FSCM NO 16331	DWG NO 63A141835
DRAWN		SCALE		
ISSUED		SHEET		32

SH 32A D
63A141835
DWG. NO
A
SIZE

3.4.2 IDENTIFICATION AND MARKING

THE DISPLAY UNIT, POWER SUPPLY(S), AND KEYBOARD SHALL BE IDENTIFIED WITH VENDOR NUMBER, GENERAL ELECTRIC NUMBER 63A141835 AND APPLICABLE PART NUMBER, AND VENDOR SERIAL NUMBER. THE POWER SUPPLY SHALL ALSO CONTAIN A NAMEPLATE IDENTIFYING INPUT/OUTPUT RATINGS. ALL MARKINGS SHALL BE IN ACCORDANCE WITH MIL-STD-130.

3.4.3 WORKMANSHIP

WORKMANSHIP SHALL COMPLY WITH MIL-STD-454, REQUIREMENT 9.

3.4.4 INTERCHANGEABILITY

INTERCHANGEABILITY SHALL COMPLY WITH MIL-E-16400, PARAGRAPH 3.4.7.

3.4.5 SAFETY

THE DESIGN AND CONSTRUCTION OF THE PLASMA DISPLAY UNIT SHALL CONFORM TO MIL-SRD-454, REQUIREMENT 1. THE PLASMA DISPLAY SHALL BE FREE OF CONDITIONS THAT CAN CAUSE ACCIDENTAL INJURY OR DEATH TO PERSONNEL, OR DAMAGE TO OR LOSS OF THE EQUIPMENT. AS A

GENERAL ELECTRIC SCS DEPT LOC DAB		SIZE A	FSCM. NO. 16331	DWG. NO. 63A141835
DRAWN		DIST. TO		
ISSUED				
		SCALE	SHEET 32A	

REV A
SH 33
63A141835
DWG NO
SIZE A

MINIMUM THE FOLLOWING CRITERIA SHOULD BE USED TO ENSURE THAT SAFETY REQUIREMENTS IS SATISFIED.

- A. DESIGN MINIMIZES THE POSSIBILITY OF FAILURES WHICH COULD PRESENT A CRITICAL OR CATASTROPHIC HAZARDOUS CONDITION, AS DEFINED IN MIL-STD-882.
- B. DESIGN IS SUCH THAT ACCESS DURING OPERATIONS, MAINTENANCE, REPAIR OR ADJUSTMENT MINIMIZES PERSONNEL EXPOSURE TO HAZARDS SUCH AS HIGH VOLTAGE, CUTTING EDGES, SHARP POINTS, OR HAZARDOUS MATERIALS.
- C. SUITABLE WARNINGS AND CAUTION STATEMENTS ARE INCLUDED IN OPERATIONS, MAINTENANCE, AND REPAIR INSTRUCTIONS.
- D. DESIGN SHALL PROVIDE FOR WARNING AND CAUTION LABELS AS REQUIRED FOR PERSONNEL AND EQUIPMENT PROTECTION.

3.5 DOCUMENTATION

TECHNICAL MANUALS SHALL BE PROVIDED THAT MEET THE REQUIREMENTS SPECIFIED IN MIL-M-7298C, MILITARY SPECIFICATION, MANUALS, TECHNICAL, COMMERCIAL EQUIPMENT, WITH AMENDMENT 2 DATED 15 APRIL 1975. A REPRODUCIBLE CAMERA-READY COPY AND TWO REVIEW COPIES SHALL BE PROVIDED AS EARLY AS POSSIBLE AFTER RECEIPT OF ORDER BUT NOT LATER THAN THE DATE OF THE DELIVERY OF THE FIRST UNIT. A COPYRIGHT RELEASE AUTHORIZING REPRODUCTION OF THE TECHNICAL MANUAL BY GENERAL ELECTRIC AND THE GOVERNMENT SHALL BE FORWARDED WITH THE CAMERA-READY COPY.

4.0 ACCEPTANCE REQUIREMENTS


4.1 QUALIFICATION TESTS

QUALIFICATION TESTS SHALL BE PERFORMED FOR FORMAL DEMONSTRATION OF PERFORMANCE AND DESIGN ADEQUACY ON THE FIRST ARTICLE TO VERIFY DESIGN FOR THOSE REQUIREMENTS OF SECTION 3 IDENTIFIED IN TABLE 6.

FORMAL QUALIFICATION TESTING OF THE FIRST ARTICLE SHALL NOT BE REQUIRED IF THE SUPPLIER CAN PROVIDE DATA IN THE FORM PREVIOUS QUALIFICATION TESTS, ANALYSIS, AND SIMILARITY TO PREVIOUSLY TESTED EQUIPMENT WHICH PROVES TO THE SATISFACTION OF THE BUYER THAT THE EQUIPMENT MEETS THE REQUIREMENTS OF THIS SPECIFICATION. WHERE THE SUPPLIER CANNOT PROVIDE SUFFICIENT OR ACCEPTABLE DOCUMENTATION FOR A PARTICULAR REQUIREMENT OR REQUIREMENTS, TEST(S) OF THOSE REQUIREMENTS SHALL BE PERFORMED.

4.2 INSPECTIONS

INSPECTIONS SHALL BE PERFORMED ON THE FIRST ARTICLE AND SUBSEQUENT PRODUCTION TO VERIFY GENERAL DESIGN FEATURES, WORKMANSHIP, MATERIALS, PARTS, PROCESSES, IDENTIFICATION, AND MARKING AS IDENTIFIED IN TABLE 6.

GENERAL  ELECTRIC SCSD DEPT LOC Daytona Beach		SIZE A	FSCM. NO. 16331	DWG. NO. 63A141835	DIST. TO
DRAWN					
ISSUED		SCALE		SHEET 33	

REV A
33A
63A141835
DWG. NO.
A

4.3 ANALYSIS

ANALYSIS SHALL BE PERFORMED TO VERIFY THOSE REQUIREMENTS OF SECTION 3 AS IDENTIFIED IN TABLE 6.

4.4 TESTS

TEST SHALL BE PERFORMED AND DATA RECORDED FOR ALL PRODUCTION ITEMS FOR THOSE SECTION 3 REQUIREMENTS IDENTIFIED IN TABLE 6.

GENERAL ELECTRIC
SCSD DEPT LOC Daytona Beach

SIZE FSCM. NO.

A

16331

DWG. NO.

63A141835

DRAWN

ISSUED

SCALE

SHEET

33A

DIST. TO

SH 34 REV L
DWG NO 63A141835
SIZE A

4.5 REJECTION

THE FOLLOWING SHALL BE CAUSE FOR REJECTION OF THE EQUIPMENT PRESENTED FOR INSPECTION:

- A. FAILURE TO MEET THE REQUIREMENTS OF PARAGRAPH 3.0 OF THIS SPECIFICATION.
- B. FAILURE TO COMPLY WITH THE SUPPLIER'S APPROVED QUALITY SYSTEM AND WORKMANSHIP PROCEDURES.
- C. FAILURE TO PROVIDE THE DOCUMENTATION SPECIFIED IN THIS DOCUMENT.
- D. FAILURE TO MEET THE REQUIREMENTS OF PARAGRAPH 4.1, 4.2, 4.3 AND 4.4 OF THIS SPECIFICATION.

4.6 TEST DATA

THE SUPPLIER SHALL PROVIDE ONE COPY OF ALL TEST DATA AT ACCEPTANCE.

4.7 CONFIGURATION MANAGEMENT

THE SUPPLIER SHALL PROVIDE GE/SCSD WITH INFORMATION REGARDING ANY CHANGES EFFECTING THE FORM, FIT, OR FUNCTION OF THE HARDWARE BEING PROVIDED BY THE SUPPLIER IN SUPPORT OF THIS SPECIFICATION.

GENERAL ELECTRIC SCS DEPT LCTN DAB		SIZE A	FSCM NO 16331	DWG NO 63A141835	DISTR TO
DRAWN					
ISSUED		SCALE	SHEET 34		

SH. 35

63A141835

DWG. NO.

SIZE

A

REV. N

TABLE 6. ACCEPTANCE REQUIREMENTS

PARA NO.	TITLE	QUALIFICATION TEST	TEST	INSPECTION	ANALYSIS	NOT APPLICABLE
3.2.1.1	DISPLAY AREA	X				
3.2.1.2	ADDRESSABLE PIXELS	X				
3.2.1.3	PIXEL SPACING	X				
3.2.1.4	PIXEL SIZE	X				
3.2.1.5	PIXEL DEFECTS			X		
3.2.1.6	DUTY CYCLE				X	
3.2.2.1	BRIGHTNESS	X				
3.2.2.2	CONTRAST RATIO	X				
3.2.2.3	LIGHT SPECTRUM	X				
3.2.2.4	VIEWING ANGLE	X				
3.2.2.5	FLICKER	X		X		
3.2.2.6	LINEARITY	X				
3.2.2.7	DISPLAY SPEED	X				
3.2.2.8	SCREEN ERASE	X				
3.2.3.1	CHARACTER SIZE	X				
3.2.3.2	SPECIAL CHARACTERS	X	X			
3.2.3.3	CURSOR DISPLAY	X	X			
3.2.3.4	DISPLAY CAPACITY	X				
3.2.4	DATA TRANSFER	X				
3.2.5	ASCII CODE SET	X				
3.2.6.1	SCROLLING	X	X			
3.2.6.2	SPLIT SCREEN	X	X			
3.2.6.3	USER PROGRAMMABLE CHARACTERS	X	X			
3.2.6.4	PIXEL BIT MAP ACCESSIBILITY	X	X			
3.2.6.5	ROW, COLUMN ADDRESSING	X	X			
3.2.6.6	BLINKING	X	X			
3.2.6.7	REVERSE VIDEO	X	X			
3.2.6.8	UNDERLINING	X	X			
3.2.6.9	ADDRESSABLE MODES	X				
3.2.6.10	EXTENDED MEMORY	X	X			
3.2.6.11	BELL ALARM	X	X			
3.2.7	PHYSICAL CHARACTERISTICS/DIS TER.	X				
3.2.8.1	VOLTAGES	X				
3.2.8.2	PHYSICAL CHARACTERISTICS/PSU	X				

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TABLE 6. ACCEPTANCE REQUIREMENTS (CONTINUED)

PARA NO.	TITLE	QUALIFICATION TEST	TEST	INSPECTION	ANALYSIS	NOT APPLICABLE
3.2.9.1	SPECIAL CHARACTERS (MARKING ONLY)	X		X		
3.2.9.2	KEYBOARD KEY LAYOUT AND MARKING			X		
3.2.9.3	KEYBOARD CONNECTOR			X		
3.2.9.4	KEYBOARD SLOPE	X				
3.2.9.5	KEY SIZE	X				
3.2.9.6	KEY SPACING	X				
3.2.9.7	KEY ACTIVATING RESISTANCE	X				
3.2.9.8	KEY DISPLACEMENT	X				
3.2.9.9	DRIPPROOF CONSTRUCTION	X				
3.2.9.10	PHYSICAL CHARACTERISTICS/KEYBOARD	X				
3.2.10	CONNECTORS	X		X		
3.3.1	RELIABILITY				X	
3.3.2	USEFUL LIFE				X	
3.3.3	MAINTAINABILITY				X	
3.3.4	BUILT-IN-TEST	X	X			
3.3.5.1	AMBIENT TEMPERATURE	X				
3.3.5.2	RELATIVE HUMIDITY	X				
3.3.5.3	VIBRATION	X				
3.3.5.4	SHOCK	X				
3.3.5.5	SALT FOG	X				
3.3.5.6	FUNGUS				X	
3.3.5.7	MERCURY				X	
3.3.5.8	ELECTROMAGNETIC EMISSIONS AND SUS.	X				
3.4.1	MATERIALS, PROCESS AND PARTS			X		
3.4.2	IDENTIFICATION AND MARKING			X		
3.4.3	WORKMANSHIP			X		
3.4.4	INTERCHANGEABILITY				X	
3.4.5	SAFETY			X		
3.5	DOCUMENTATION			X		

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5.0 PREPARATION FOR DELIVERY

THE PLASMA DISPLAY UNIT SHALL BE PRESERVED AND PACKAGED IN ACCORDANCE WITH MIL-P-116, LEVEL III REQUIREMENTS.

6.0 CONFIGURATION DETAILS

THE PLASMA DISPLAY UNIT SHALL INCLUDE ONE PLASMA DISPLAY TERMINAL, A POWER SUPPLY UNIT, A KEYBOARD, AND THE NECESSARY CIRCUITRY TO PROVIDE THE REQUIREMENTS AS SPECIFIED IN SECTIONS 3, 4, and 5.

PART NUMBER	DESCRIPTION	FIG NO
P1	PLASMA DISPLAY TERMINAL	2
P2	PLASMA DISPLAY POWER SUPPLY	4
P3	PLASMA DISPLAY KEYBOARD	7
P4	PLASMA DISPLAY TERMINAL	2A

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7.0 NOTES

NOT APPLICABLE

8.0 SUGGESTED SOURCES (SEE TABLE 7)

IDENTIFICATION OF THE "SUGGESTED SOURCE(S) OF SUPPLY" HEREON IS NOT TO BE CONSTRUED AS A GUARANTEE OF PRESENT OR CONTINUED AVAILABILITY AS A SOURCE OF SUPPLY FOR THE ITEM(S).

TABLE 7. SUGGESTED SOURCES

PART NO.	VENDOR	VENDOR
P1	SAI	
P2	SAI	
P3	SAI	
P4	SAI	

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CONTRACT DATA REQUIREMENTS LIST (CDRL)

Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the government Issuing Contracting Officer for the Contract/PR No. in Block E.

A. CONTRACT LINE ITEM NO. 0007	B. EXHIBIT A	C. CATEGORY: TDP _____ TM _____ OTHER <u>TESTING</u>
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D. SYSTEM/ITEM CONSOLE DISPLAY UNIT	E. CONTRACT/PR NO.	F. CONTRACTOR
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1. DATA ITEM NO. A001	2. TITLE OF DATA ITEM FIRST ARTICLE TEST REPORT	3. SUBTITLE SUPPLEMENTAL ENGINEERING DATA FOR TESTING
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4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE SOW Para 4.4	6. REQUIRING OFFICE NSWCCD-SSS CODE 955
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7. DD 250 REQ NO	9. DIST STATEMENT REQUIRED SEE BLK 16	10. FREQUENCY ONE/R	12. DATE OF FIRST SUBMISSION SEE BLK 16	14. DISTRIBUTION			
8. APP CODE		11. AS OF DATE	13. DATE IF SUBSEQUENT SUBM. SEE BLK 16	a. ADDRESSEE		b. COPIES	
						draft	reg repr

[illegible]

G. PREPARED BY MICHAEL GRAY, CODE 955		H. DATE 11/7/03	I. APPROVED BY	J. DATE 11/7/03
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[illegible]

18. ESTIMATED TOTAL PRICE	
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CONTRACT DATA REQUIREMENTS LIST (CDRL)

Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the government Issuing Contracting Officer for the Contract/PR No. in Block E.

A. CONTRACT LINE ITEM NO. 0009		B. EXHIBIT A		C. CATEGORY: TDP _____ TM _____ OTHER _____	
D. SYSTEM/ITEM DDG MCS CONSOLES DISPLAY PANEL			E. CONTRACT/PR NO.		F. CONTRACTOR
1. DATA ITEM NO. A003	2. TITLE OF DATA ITEM SOFTWARE PRODUCT SPECIFICATION (SPS)			3. SUBTITLE	
4. AUTHORITY (Data Acquisition Document No.) DI-IPSC-81441			5. CONTRACT REFERENCE SEE BLK 16		6. REQUIRING OFFICE NSWCCD-SSES 955
7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION SEE BLK 16		14. DISTRIBUTION a. ADDRESSEE b. COPIES draft reg final repr
8. APP CODE		11. AS OF DATE	13. DATE IF SUBSEQUENT SUBM.		
16. REMARKS BLOCK 5: Specification of Requirements 4.2 Reference IEEE 12207.0 - 5.2.7.1 NOTE: DI-IPSC-81441 requires that the executable and source code is either referenced or contained in the document. This CDRL requires that the SPS "contains" the actual executable and source code in electronic media and NOT reference them - see tailoring of DI-IPSC-81441 below: 1. SPS Block 3 - Description - delete "references" the SPS shall "contain" not "reference" the executable, source files and software support information .. 2. Paragraph 3.1 - delete "by reference to enclosed" 3. Paragraph 3.2 - delete "by reference to enclosed" An SPS for the First Article and the final software product shall be delivered in hard copy and electronic media of contractor's choosing and agreed to by the Navy. SPS for the final software product shall include information on purchasing on include any general use licenses from CDM Technologies for the elements of Intelligent Cooperative Decision Model (CDM) which are required software necessary to deploy display panel on DDG Class Ships. BLOCK 12: Delivery shall be 210 days after date of order or 30 days after First Article Approval, whichever occurs last.					
15. TOTAL ----->					
G. PREPARED BY MICHAEL GRAY, CODE 955			H. DATE 11/7/03		I. APPROVED BY
					J. DATE 11/7/03

17. PRICE GROUP

18. ESTIMATED
TOTAL PRICE

CONTRACT DATA REQUIREMENTS LIST (CDRL)

Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the government Issuing Contracting Officer for the Contract/PR No. in Block E.

A. CONTRACT LINE ITEM NO.
0010

B. EXHIBIT
A

C. CATEGORY:
TDP _____ TM _____ OTHER PROVISIONING

D. SYSTEM/ITEM

E. CONTRACT/PR NO.

F. CONTRACTOR

1. DATA ITEM NO.
A004

2. TITLE OF DATA ITEM
LOGISTICS MANAGEMENT INFORMATION (LMI) SUMMARY

3. SUBTITLE
ENGRG DATA FOR PROVISIONING (EDFP) (DIGITAL)

4. AUTHORITY (Data Acquisition Document No.)
DI-ALSS-81530 SEE BLK 16

5. CONTRACT REFERENCE
SOW Para 4.3

6. REQUIRING OFFICE
PPA / TechSupp Activity (TSA)

7. DD 250 REQ
DD

9. DIST STATEMENT
REQUIRED
SEE BLK 16

10. FREQUENCY
ONE/R

11. AS OF DATE

12. DATE OF FIRST SUBMISSION
SEE BLK 16

13. DATE IF SUBSEQUENT SUBM.
SEE BLK 16

14. DISTRIBUTION

a. ADDRESSEE

b. COPIES

draft reg repr

16. REMARKS

BLOCK 4: The contractor shall provide EDFP in accordance with the LMII Summary for EDFP.

BLOCK 9: Distribution Statement A: Approved for Public Release; Distribution is Unlimited; unless proprietary or classified information applies, then distribution statement C applies, and all other requests for this data item shall be referred to Prime Provisioning Activity (PPA).

BLOCK 12: Delivery shall be 210 days after date of order or 30 days after First Article Approval, whichever occurs last. Government will provide approval or disapproval within 30 calendar days after receipt of the EDFP. Contractor shall resubmit within 30 calendar days after receipt of the Government's disapproval.

BLOCK 13: Revisions shall be submitted within 60 calendar days after approval of a change by the Government and delivered concurrent with the Design Change Notices.

BLOCK 14: One copy of drawings shall be in digital form. The acceptable formats for these engineering drawings are:

a. C4 Navy CALS variant (preferred format).

b. NAVSEA CAD-2 format.

c. Native CAD

15. TOTAL ----->

17. PRICE GROUP

18. ESTIMATED
TOTAL PRICE

\$0.00

G. PREPARED BY
MICHAEL GRAY, CODE 955

H. DATE
11/7/03

I. APPROVED BY

J. DATE
11/7/03

SUMMARY TITLE: Engineering Data For Provisioning (EDFP)**SPECIFIC INSTRUCTIONS:**

The Contractor shall identify and provide EDEP for all systems, equipment, and repair parts for all article(s) on contract. For items without a National Stock Number (NSN), recognized industry standard or government specification or standard, the following order of precedence is required for EDFP:

- a. Technical Data equivalent to approved Product Engineering Drawings as defined in MIL-DTL-3 1000
- b. Technical Data equivalent to in-process/incomplete Product Engineering Drawings as defined in MIL-DTL-3 1000
- c. Commercial drawings
- d. Commercial manuals, catalogs or catalog descriptions
- e. Sketches or photographs with a brief description of dimensional, material, mechanical, electrical or other characteristics.

EDEP shall provide for the following:

- a. Technical identification of items of maintenance support considerations
- b. Preparation of item identification for the purpose of assigning National Stock Numbers (NSNs)
- c. Review for item entry control
- d. Standardization
- e. Review for potential interchangeability and substitutability
- f. Item management coding
- g. Preparation of allowance/issue lists
- h. Source, Maintenance, and Recoverability coding

EDFP shall not be provided when the item is:

- a. Identified by a government specification or standard which completely describes the item including its material, dimensional, mechanical and electrical characteristics
- b. Identified in Defense Logistics Information as having an NSN with salient characteristics identical to the item
- c. Item is listed as a reference item (subsequent appearance of an item) on a parts list

DATA NOT IN LMI SPECIFICATION (Please provide the data product title, its definition and its format):

Engineering Data for Provisioning (EDFP) is engineering data used in the initial provisioning of support resources. EDEP is the technical data which provides definitive identification of dimensional, material, mechanical, electrical, or other characteristics adequate for provisioning of the support items of the end article(s) on contract. EDEP consists of data such as specifications, standards, drawings, photographs, sketches and descriptions, and the necessary assembly and general arrangement drawings, schematic, drawings, schematic diagrams, wiring and cable diagrams, etc., or what is sometimes referred to as form, fit, and function. EDEP format and content must be prepared in accordance with the latest industry standards and must be reproducible.

SUMMARY LAYOUT (if applicable): Government Provided Γ Contractor Provided Γ